INSECT CONTROL SURVEY REPORT

TETON NATIONAL FOREST

FALL 1933

Jackson, Wyo.
Dec. 22, 1933

Insect Survey
Teton National Forest
1933 (Fall)

INSECT SURVEY REPORT

On October 16, 1933, a survey of the area contiguous to the Gravel Creek Fire of 1931, was started.

Some 50,000 acres were covered between October 15 and November 17, 1933. Maps to cover 34,340 acres of this amount accompany this report. The balance, 16,660 acres, was not mapped and was covered by random lines to determine the advisability of cruising.

The cruise covered Pacific Creek, Whetstone Creek, Gravel Creek, Enos Creek, and Atlantic Creek drainages, Teton National Forest.

There are twenty-one maps representing the area. New attacks are indicated by figures in red surrounded by a circle; red dots indicate last years red tops. At the bottom of each map sheet is the number of acres of Lodgepole Pine type to be covered and the estimated number of trees to be treated. (See summary sheet.)

Aside from the regular survey work, two other projects entered the work:

First, the determination of Lodgepole Pine in mixture.

Second, a study of the White Bark Pine infestation in this area.

Determination of Lodgepole Pine in Mixture

This project became necessary through the fact that the stands on the Teton are of varying mixed species. We began by classifying

Copy sent Evenden, 11-28-33
" Forster & Barn. of Ent. 12-14-33

the types to use in our mapping work as follows:

Alpine Fir - Spruce, either one predominent

Spruce - Lodgepole Pine, either one predominent

Alpine Fir - Lodgepole Pine, either one predominent

Spruce - Alpine Fir - Lodge Pole Pine, either one predominent.

In a few instances, four species are mixed: Alpine Fir, Lodgepole Pine, Engelmann Spruce, White Bark Pine. As by instruction, we have given the predominating species the first place in the type.

In determining the number of Lodgepole Pine attacks in a mixed type we found it advisable to first obtain the percentage composition by species of the type containing Lodgepole Pine. We then applied our converting factor (acreage multiplier obtained from strip acres divided into the number of new attacks) to the percentage of Lodgepole Pine within the type.

Thus, if we have 100 acres of Alpine Fir, Lodgepole Pine type, with Lodgepole Pine making up 36% of the stand, our estimate of new attacks is based on 36% of the area, or from another angle our quarter plots give us the number of trees per acre by species we have merely applied percentage rather than numbers as it seems to be nearer an average for conditions represented.

Species Plots, Pacific Creek.

Plot	SP	LPP	AF	WBP	Total
1	59	21	7		87
2	41	23			64
3	27	31	2		60
4	25	4	7		36
5	57	36	8		101

Species Plots, Pacific Creek, Continued

Plot	SP	LPP	AF	WBK	Total
6	34	25	9		68
7	53	46	9		108
8	39	27	26	1	93
9	23	6	12	4	45
10	21	10	14	3	48
Total	379	229	94	8	710
%	53	33	13	1	100

Species Plots, Enos Creek

Plot	SP	LPP	AF	WBK	Total
1	14	27	23		64
2	7	35	16		58
3	13	32	23		68
4	5	27	29		61
5	4	29	16		49
6	28	18	13		59
7	25	12	14		51
8	25	17	-		42
9	43	5	14		62
10	23	16	7		46
Total	187	218	155		560
%	33	39	28		100

White Bark Pine Plots.

That an epidemic in White Bark Pine is under way is certain but we wanted to determine the increase in this infestation if possible.

In order to do this we classified the White Bark stands as,

1. Dead trees - showing few or no needles.
2. Red top trees - those attacked two years ago, 1931.
3. Yellow tops - those attacked one year ago, 1932.
4. New attacke,- those attacked this year.
5. Green tops - not attacked.

In the yellow top trees some difficulty was evidenced in classifying as 1932-1933 attacks, as some trees showing the yellow color and had been attacked but once. However, the greater number of trees showing yellowing foliage have received their second infestation.

What we asked ourselves was this: What relation to the Lodgepole Pine stands do these White Bark areas have as they are on the edges of Lodgepole and some groups are associated with Lodgepole Pine?

From "Nobletts Area" study we are certain that the, Dendroctonus spreads from White Bark Pine to Lodgepole.

We are of the belief that an infestation has started into Lodgepole Pine and that White Bark has been the immediate step to this: Our observations clearly showed us that where infested White Bark was associated with Lodgepole Pine, in every instance the Lodgepole Pine had been attacked and the scarcity of red top trees (1932 attacks) in Lodgepole Pine attested to the conclusion that the epidemic is spreading to Lodgepole Pine and that this action has not yet reached its peak. We believe that it is imperative to do something to save the Lodgepole but if nothing is done to stop the White Bark epidimic we will have a lasting job until the White Bark is wiped out or the epidemic has run its course in White Bark Pine.

This statement may sound as though we were predicting a catastrophe but when one has witnessed the condition of the stands on the Salmon, there seems to be reason to suggest immediate action.

It is true that White Bark Pine will carry the beetle three years consecutively but our observations have shown that once the bettle attacks Lodgepole it continues on its way in this species. In three instances on widely separated areas we found red top White Bark Pine (1931 attacks), no new attacks in White Bark Pine but several new Lodgepole Pine attacks and enough red top Lodgepole trees to carry the spread up to the present year. We are inclined to call White Bark Pine the immediate host.

Total Plots Taken, 21, White Bark Pine

Red Tops	102	Percent	20
Yellow Tops	137		27
New Attacks	93		18
Green Trees	141		27
Old Dead Trees	40		8
	513		100

A total of 513 trees examined.

Of this number only 8% had been killed by endemic action but within the last three years 65% of these trees have succumbed to insect attack leaving 27% so far unattacked.

These plots were taken in all parts of the Pacific Creek drainage so as to obtain as close a cross section of the area as possible. The White Bark areas contiguous to the Park Boundary on Fox Creek showed even a more enormous increase. On the Hare Bell trail out of Fox Park in two miles of trail, we counted 81 White Bark new attacks and 7 Lodgepole Pine and these infested areas are close to fairly

large stands of Lodgepole Pine bordering on the Yellowstone Park Boundary. Most of the White Bark Pine can be easily reached in this area. L. R. Coleman, Park Ranger at Thorofare Ranger Station, reported that the Yellowstone Park expected to treat the White Bark stands along the east shore of Yellowstone Lake. What effect will that have on our treating program?

Age and Fire Studies

Borings were made to determine the age of the stands and we attempted to find some clue to an attack or epidemic condition having occurred at some previous date but at this we had no success. We failed to find the right approach to the problem and as time was pressing we gave up this idea for the present. We wanted to find a date or approximate date when these trees had died but the information we gathered did not mean much.

Lodgepole Pine is the first species to come in after fires and the repetition of this well known fact will bear out what follows.

Where areas in Alpine Fir, Spruce type, were burned out and Lodgepole Pine made up a very small part of the composition of these stands, the new reproduction in these burns is Lodgepole Pine. Over the greater part of the unburned mature areas Alpine Fir is the predominating under story even in Lodgepole Pine stands. Lodgepole is not reproducing except in a few instances without the aid of fire, but after fire if these Lodgepole stands were not present reproduction of Alpine Fir and Spruce would be painfully slow for although Lodgepole is replaced by Alpine Fir, the presence of Lodgepole is necessary as a nurse crop for the climax species. It is therefor necessary

for us to protect Lodgepole Pine as an assurance for a quick ground cover following a fire.

Observations on the 1931 Gravel Creek fire lead us to believe that the stand of the future in that area will be Lodgepole Pine as protected coves and groups of Lodgepole have survived the fire throughout the fire area. No reproduction has as yet appeared on this area as this is only the second growing season.

Fires occurred in this area in 1885, 1869, 1857. Gravel Creek in 1885, Lower Pacific Creek in 1869, and Enos Lake in 1857. Age of mature stands is between 148 and 170 years throughout this whole area.

Treating Program

Let it be said in the beginning that treating will be necessary in only a small part of the area if and providing White Bark pine is excluded from the program. What we want answered is the question, should we treat White Bark wherever possible and make no special effort to reach those stands that are remote from Lodgepole areas?

As regards the mixed species, we noticed that in Alpine Fir - Spruce stands the down timber and dead standing timber was to a great extent "bug killed" Lodgepole giving evidence that either a past epidemic had wiped out the Lodgepole Pine or a slow endemic condition had existed over a period of years.

We do not suggest treating mixed stands of Alpine Fir-Lodgepole Pine-Spruce excepting where they are contiguous to pure Lodgepole Pine areas and have an epidemic or semi-epidemic condition within their borders. We found that the mixed stands did not hold the 36% Lodge-

pole Pine composition much farther up the drainage slopes than one quarter of a mile. Farther up the slopes the mixture turns to Alpine Fir-Spruce-Lodgepole Pine with a ten to fifteen percent composition for the latter species.

We hope that treating the quarter mile strip will protect the pure stands and all observations point to this possibility as the attacks are in many places weak and not far removed from the parent trees when occurring in mixed stands.

Summary

Total acreage covered by survey maps, 34,340 A.

7,617 acres Lodgepole Pine mature timber.

1,960 acres mixed species carrying Lodgepole Pine to a composition of 36%.

Total estimated trees to be treated (Lodgepole) 9,263.

Please note the following: On the areas where most of the attacks occur the normal Lodgepole type is of open orchard type ranging from 180 to 160 trees per acre when compared to a normal stand for this vicinity of 224 trees per acre. This will reduce ths figure of total trees to be treated by 29%. But we will carry this over-run to take care of the White Bark Pine which may be encountered. The total estimated number of "Red Top" Lodgepole Pine trees amounts to 1,277, comparing this to the new attacks shows an increase of about 8 to 1. This increase substantiates the necessity of treating in this area.

Very few attacks of Dendroctonus were found within the limits of

the Gravel Creek fire. Those trees that had been badly fire scarred and weakened had been taken by Ips. We have not planned to treat the scattering residuals within the fire area.

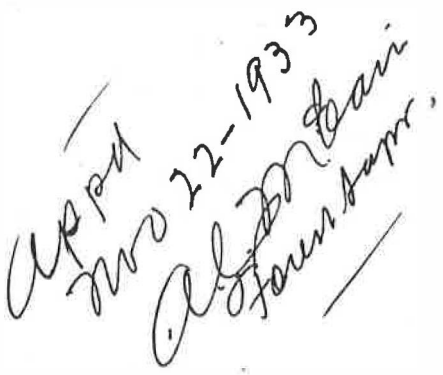
Supplies for this operation will have to be trucked fifty miles and thence by pack horse approximately twelve miles to a base camp. All transportation from the base camp will have to be by pack and saddle horse. The estimated cost of treating 9,263 trees is $10,000.00.

Respectfully submitted.

Wilfred L. Keene

W. L. Keene, Junior Forester

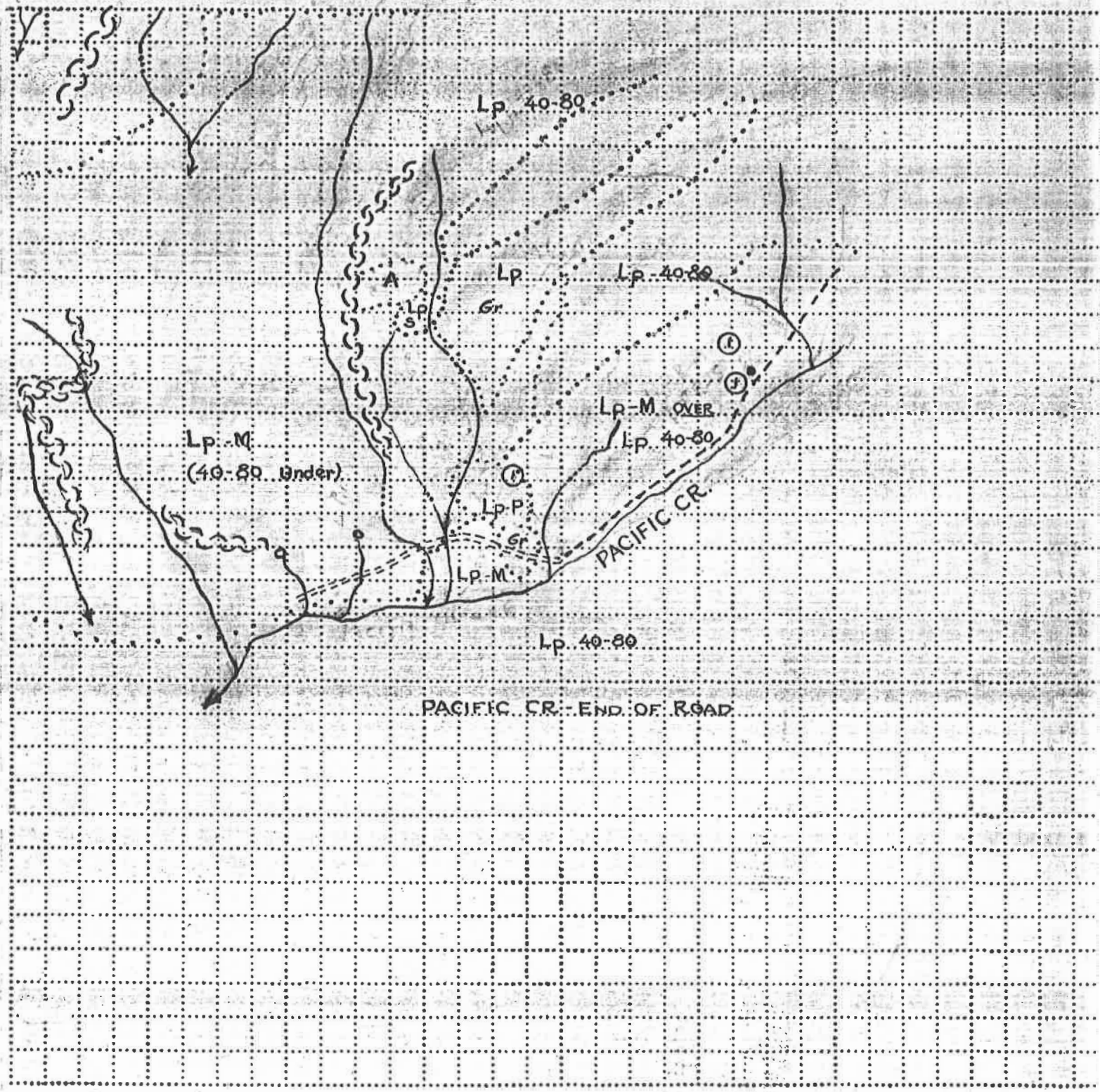
J. W. Flyod, Student Assistant



UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 960 Acres

#1 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date 10- _____, Platted by _____

Remarks: 162 A. Lp. Est 121 trees

_____ Approved _____, 19____, _____ (Approving officer.)

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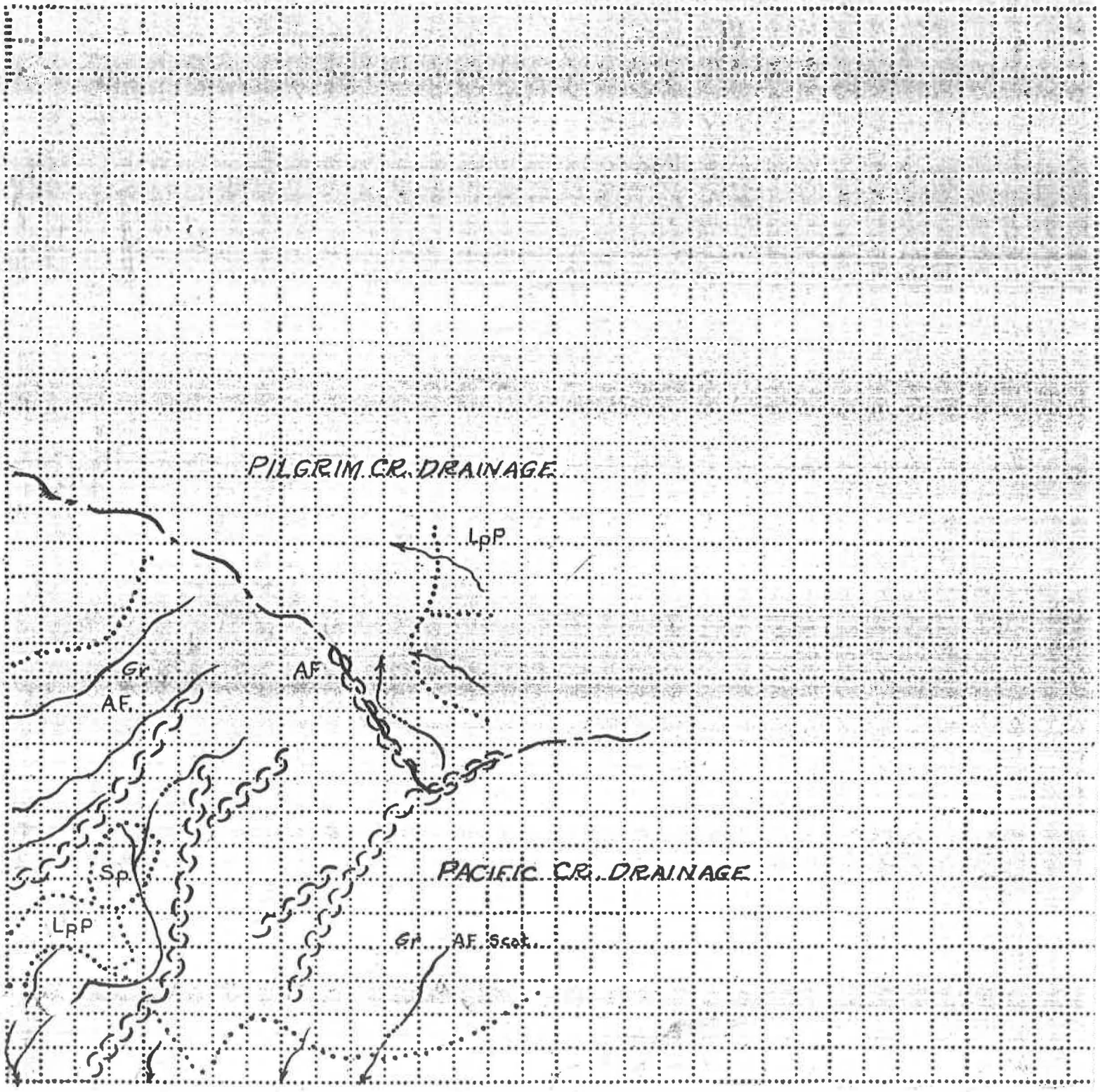
8—1465

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 640 Acres

#2 (Case designation.), (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 15 A Lp.

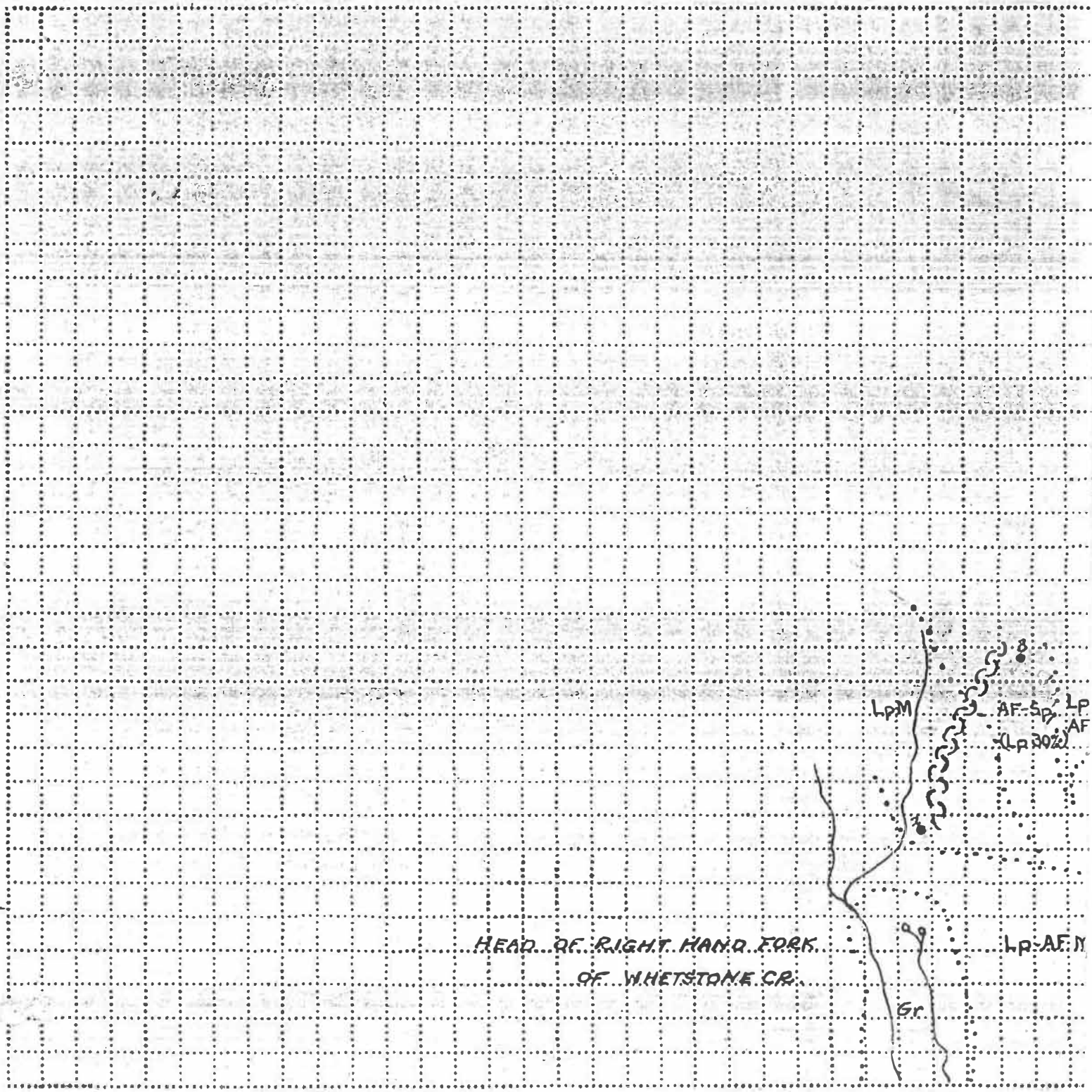
_____ Approved _____, 19____, _____ (Approving officer.)

Form 878a (Revised April, 1916) 8—3605

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 320 Acres

#3 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: _____

_____ Approved _____, 19____, _____ (Approving officer.)

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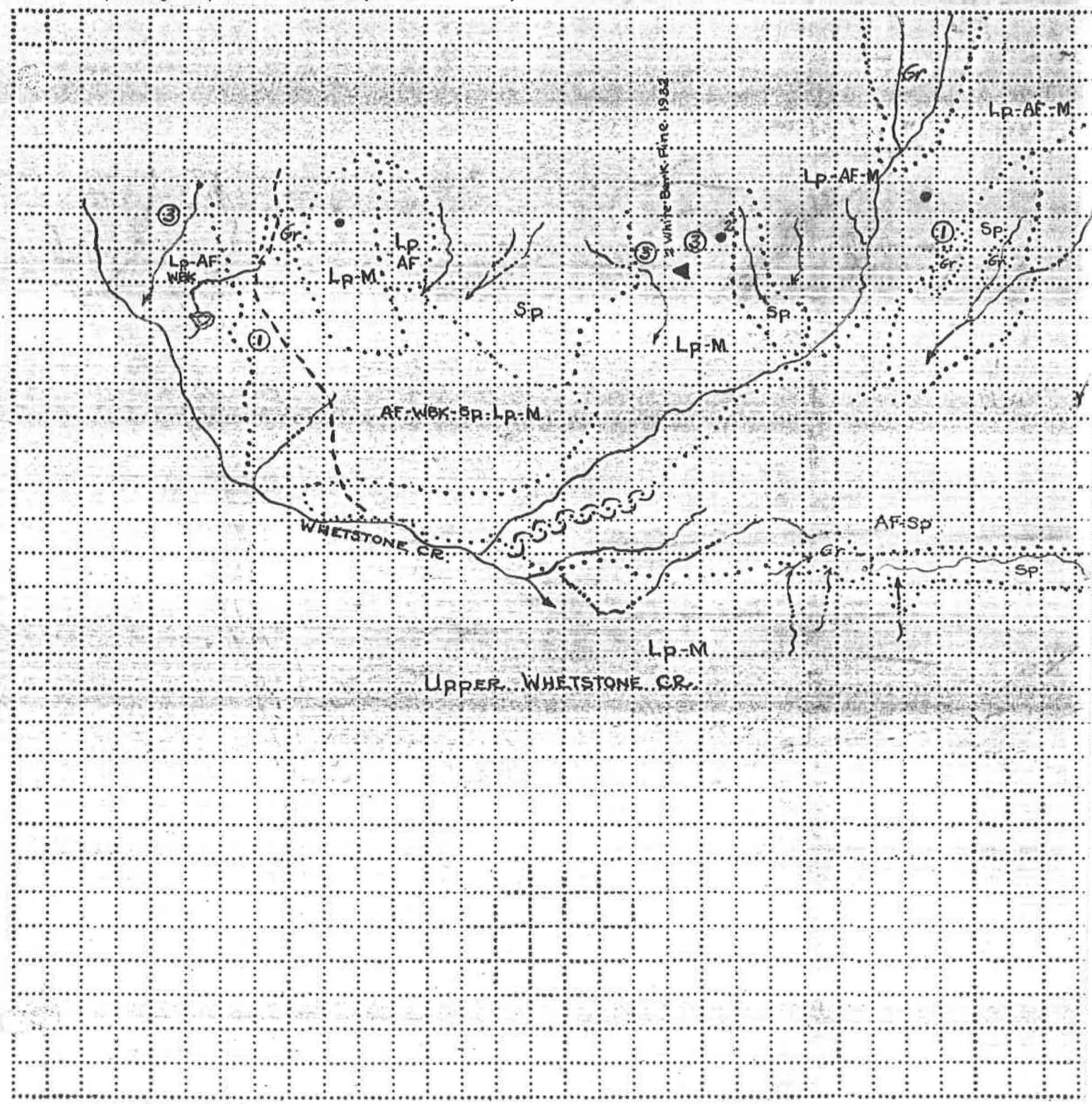
(Revised April, 1916)

8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 1280 Acres

4
(Case designation.) (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 212 & Lp 180 trees

_____ Approved _____, 19____, _____
(Ap provingofficer.)

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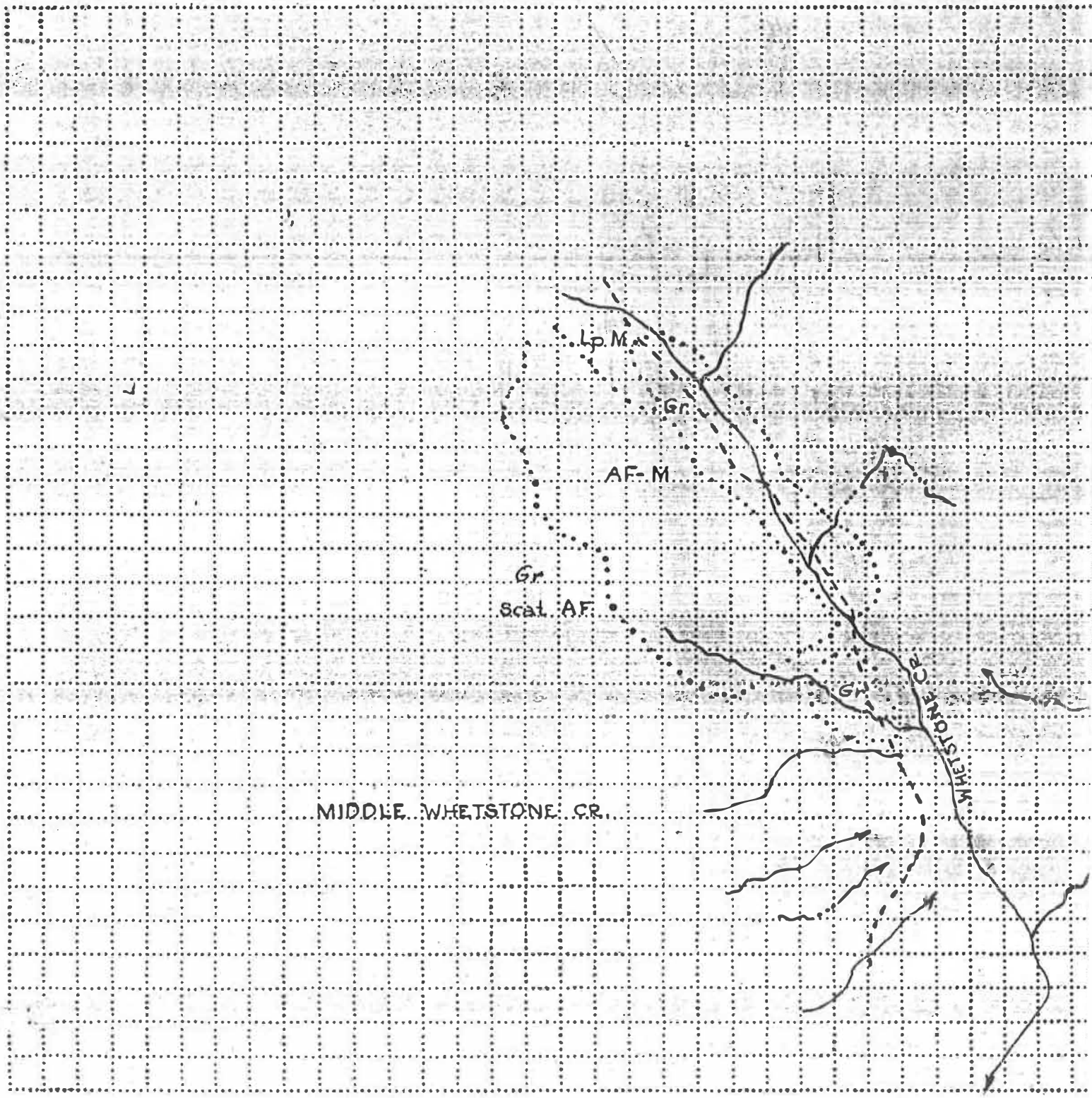
8—3465

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 640 Acres

#6 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: _____

_____ Approved _____, 19____, _____ (Approving officer.)

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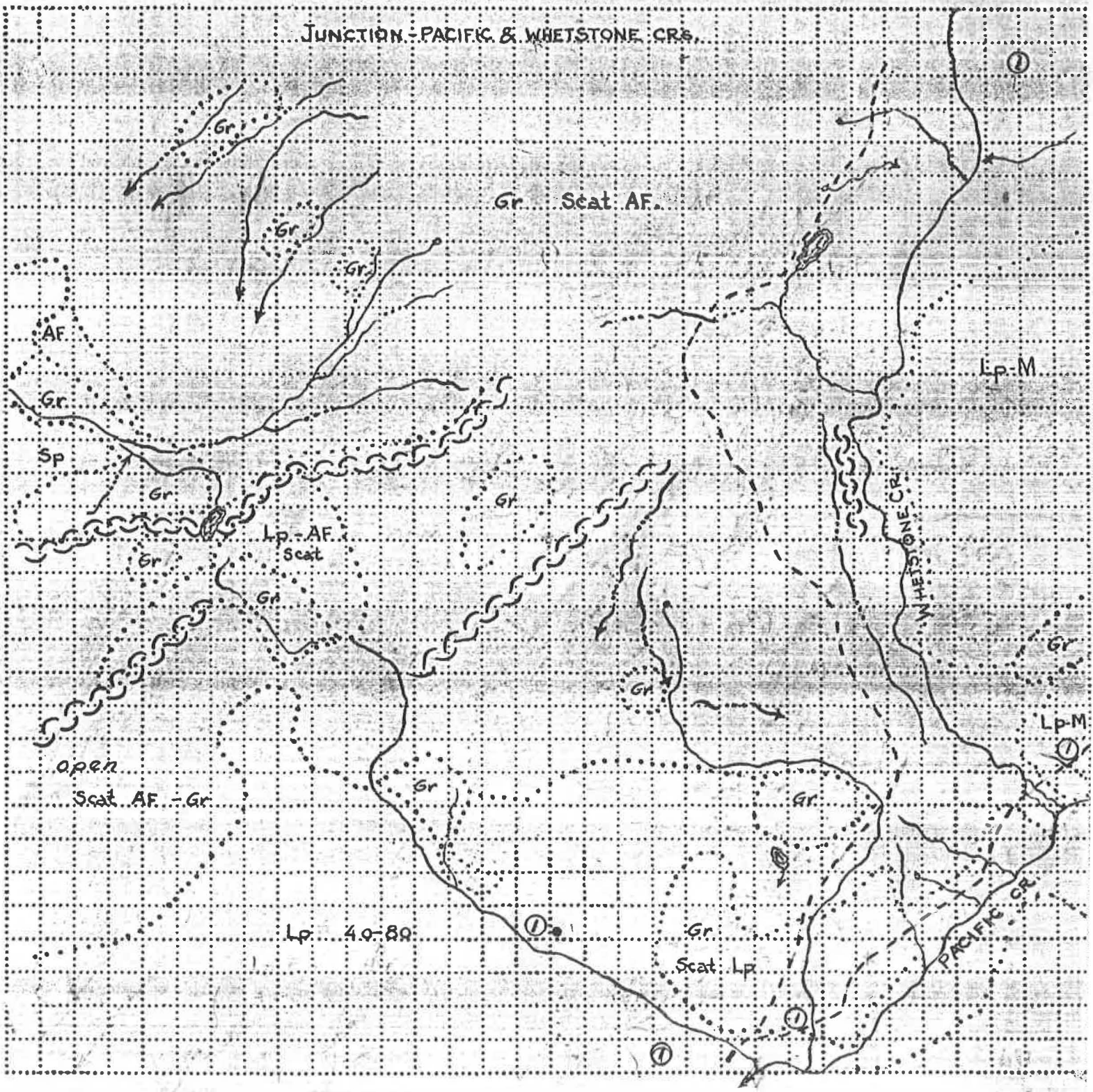
8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 2620 Acres

6 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 225' H Lp 40 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

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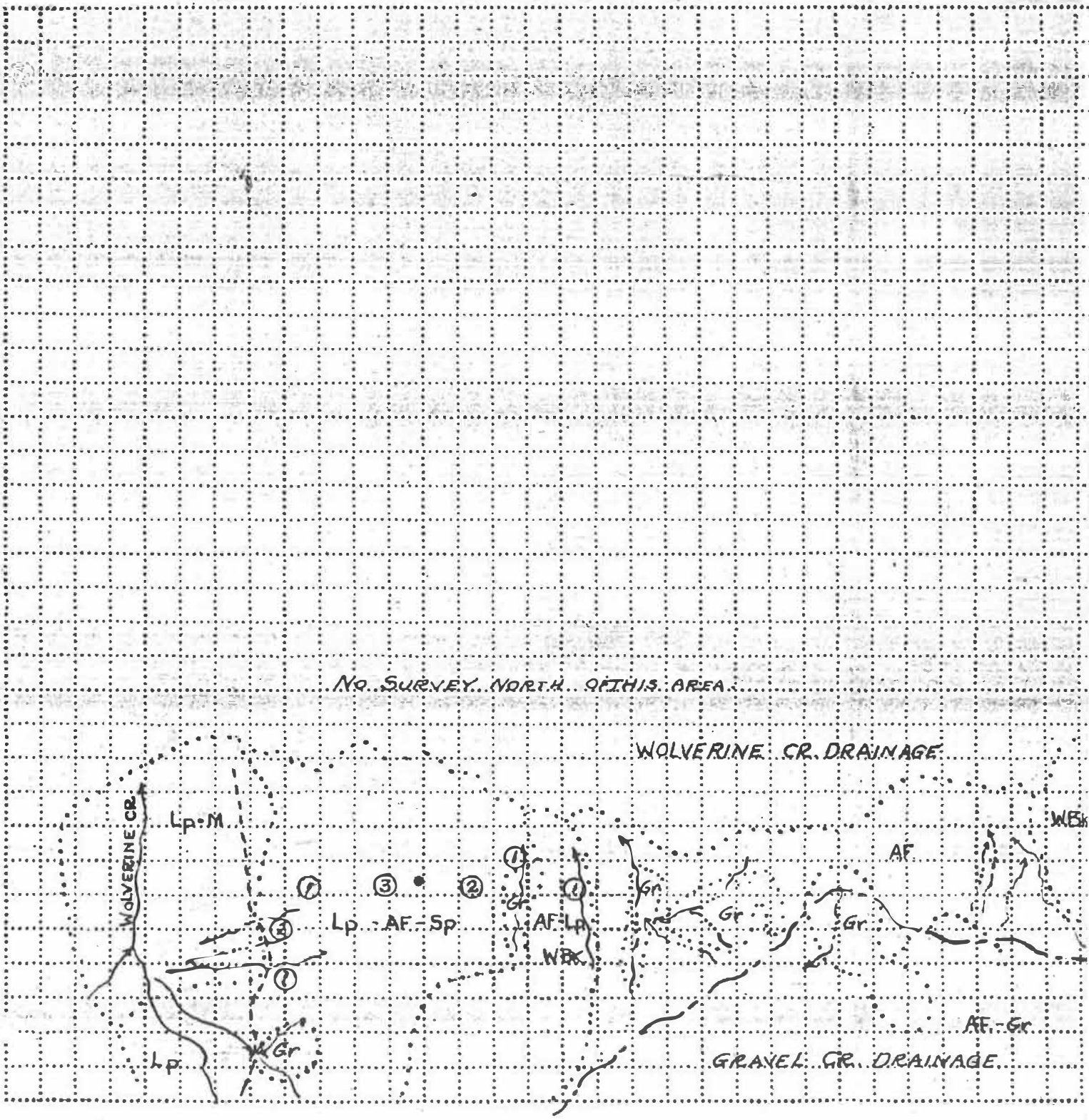
UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 640 Acres

#7 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 200 # Lp 360 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

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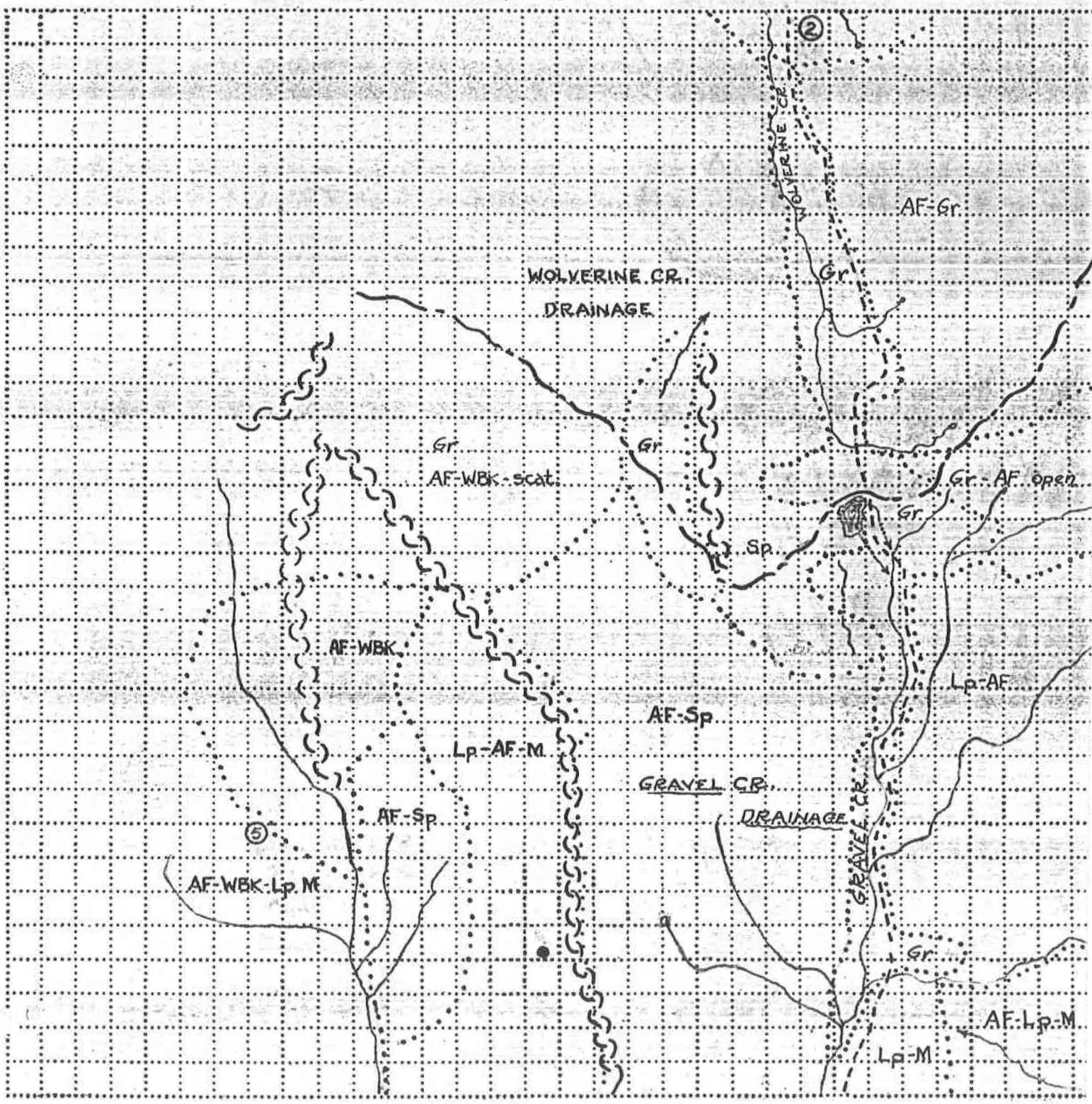
8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 2240 Acres

#8 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 320 ± Lp. 80 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

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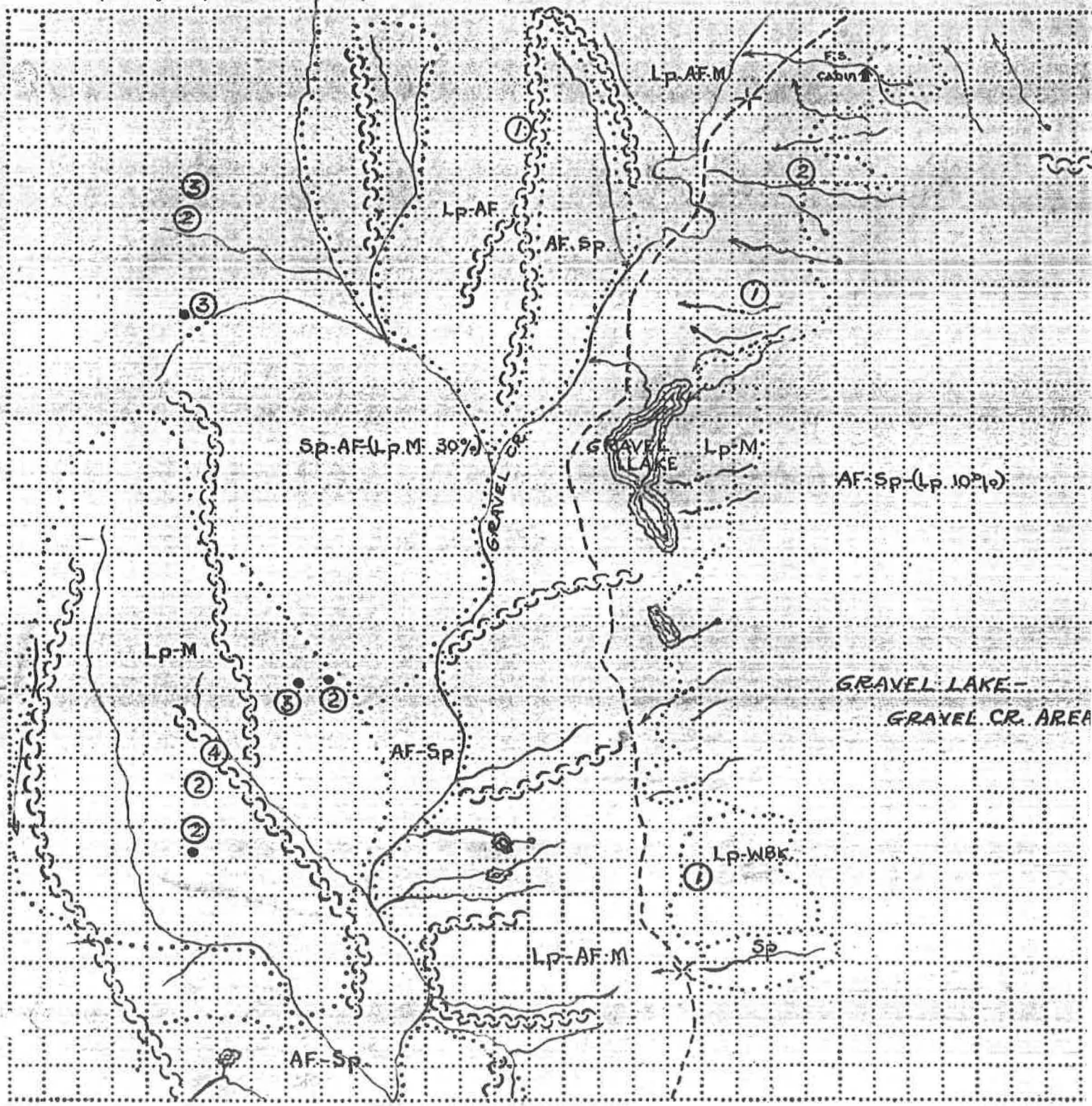
(Revised April, 1916)

8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 2560 Acres

#9 (Case designation.), (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 460 A Lp 360 TREES 600 A Mixed Lp 180 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

Form 878a
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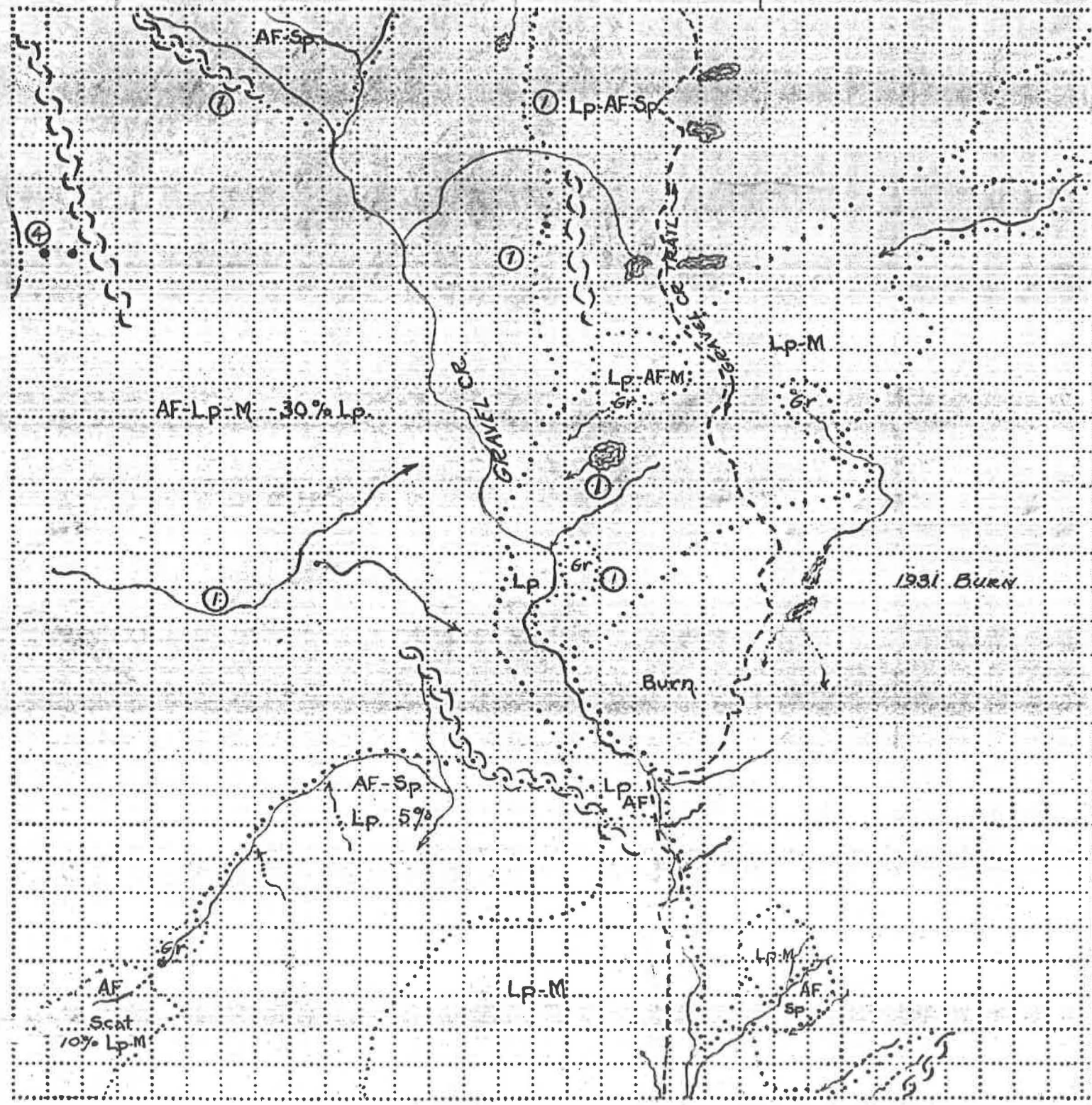
8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 2560 Acres

#10 (Case designation.) _____ (Subdivision and section.) T. _____ R. _____ Mer. Scale _____ inches = 1 mile



Field work by _____, Date _____ Platted by _____

Remarks: 200 A Lp 50 TREES 920 A Mixed 138 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

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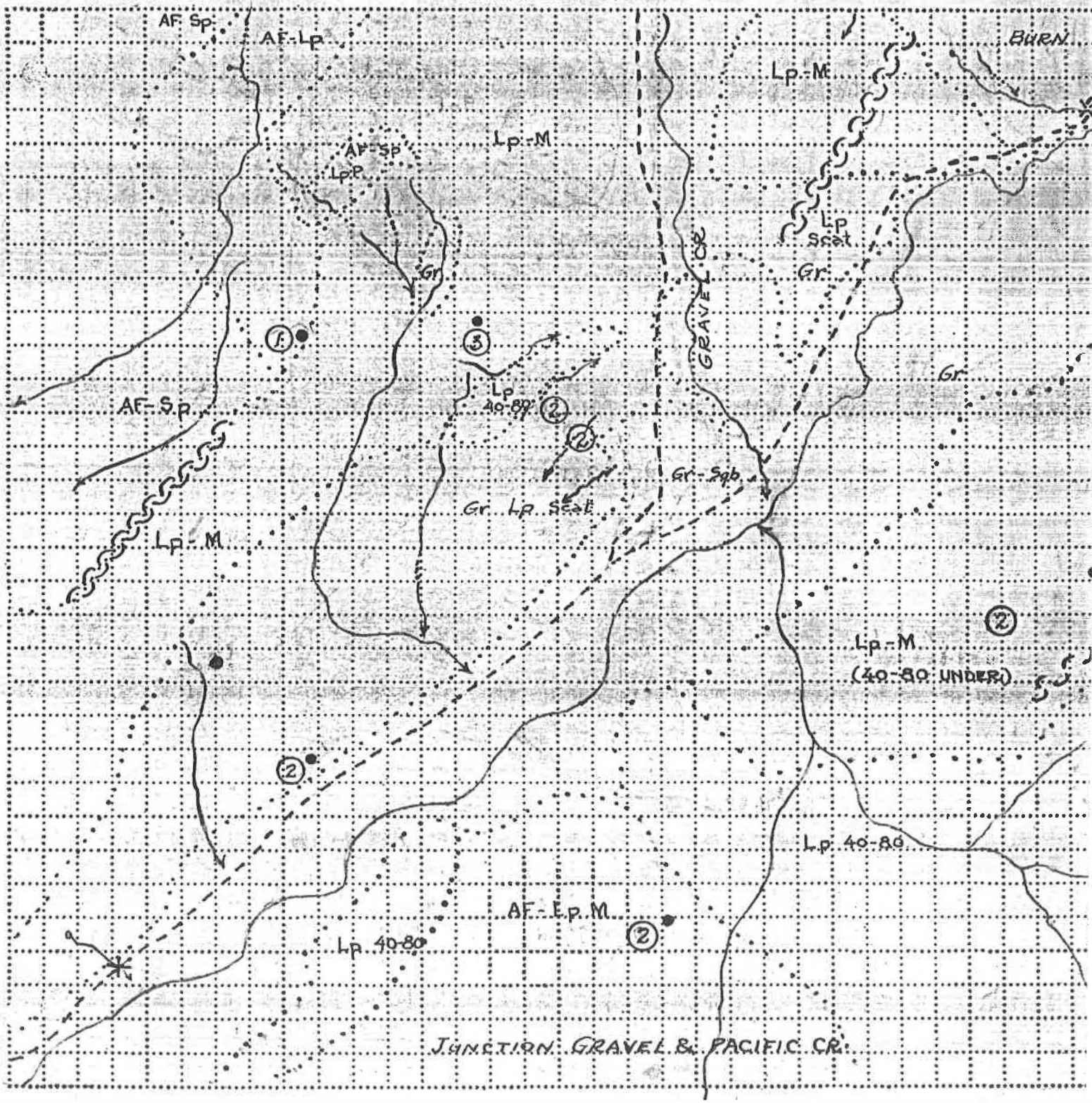
8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 2560 Acres

11 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 595 A Lp 493 TREES 440 A Mid. 43 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

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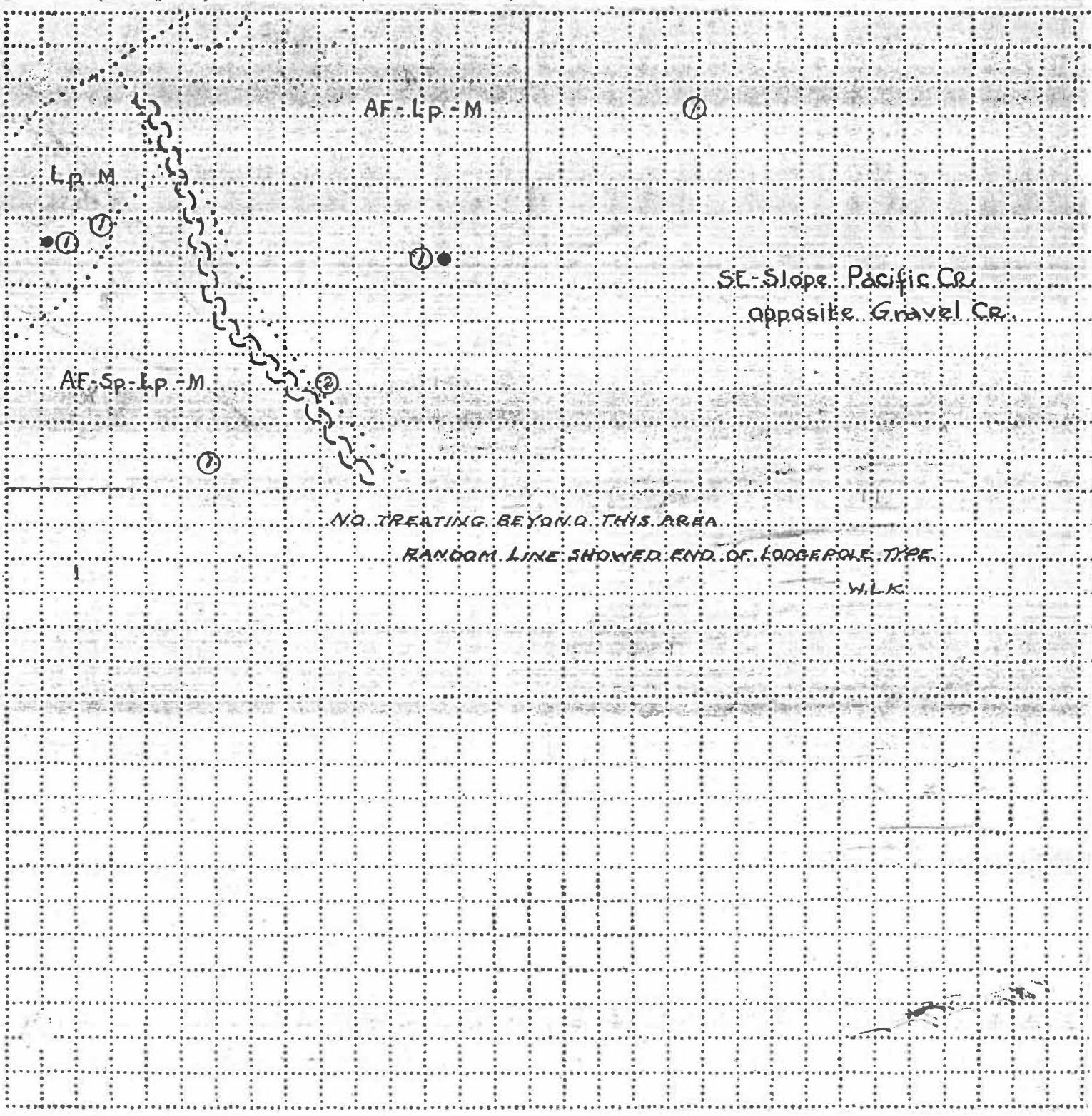
8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 1280 Acres

#12 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 760 ft Lp 324 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

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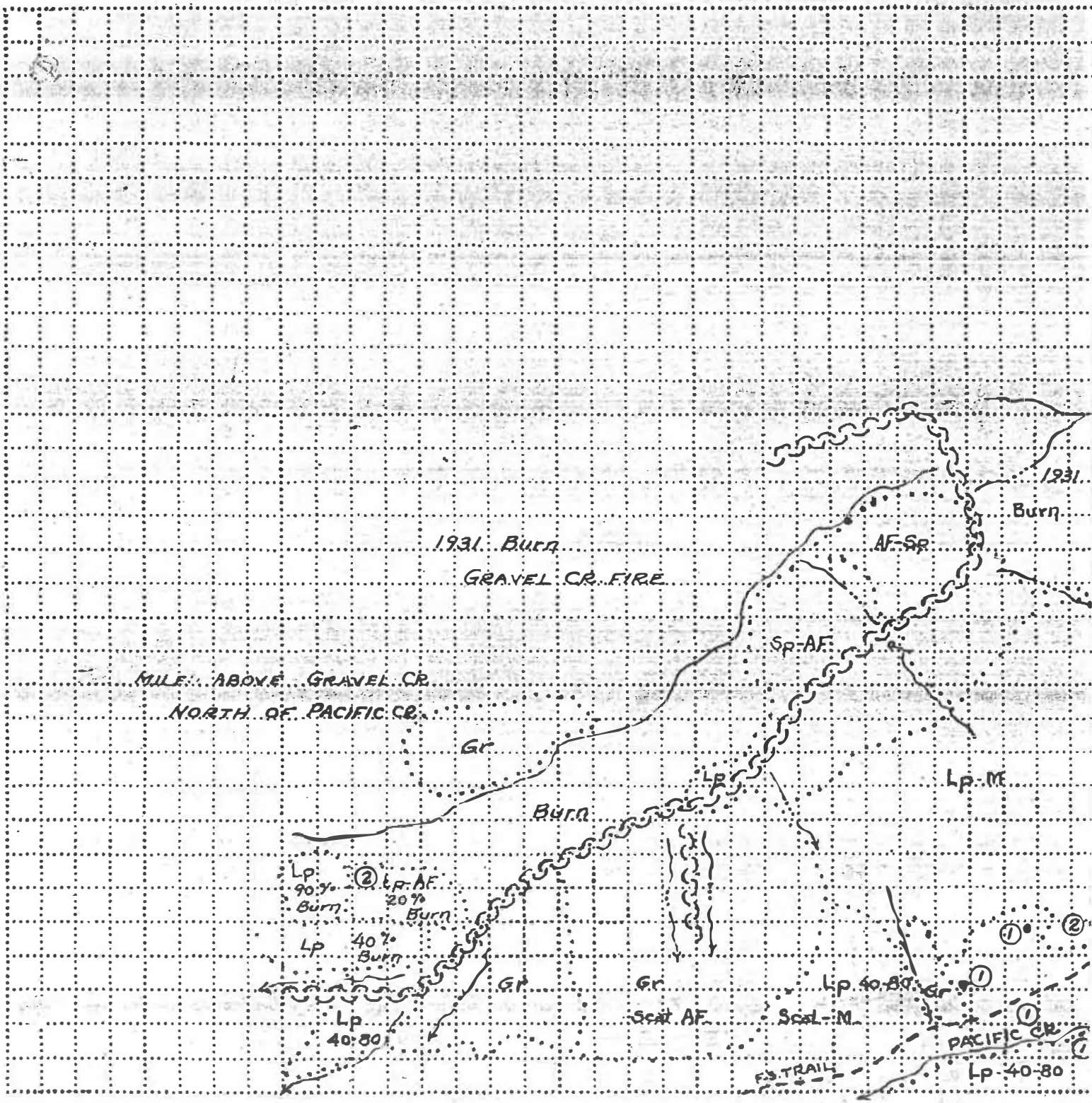
8—34035

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 960 Acres

#13 (Case designation.) _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 240 ft Lp 180 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

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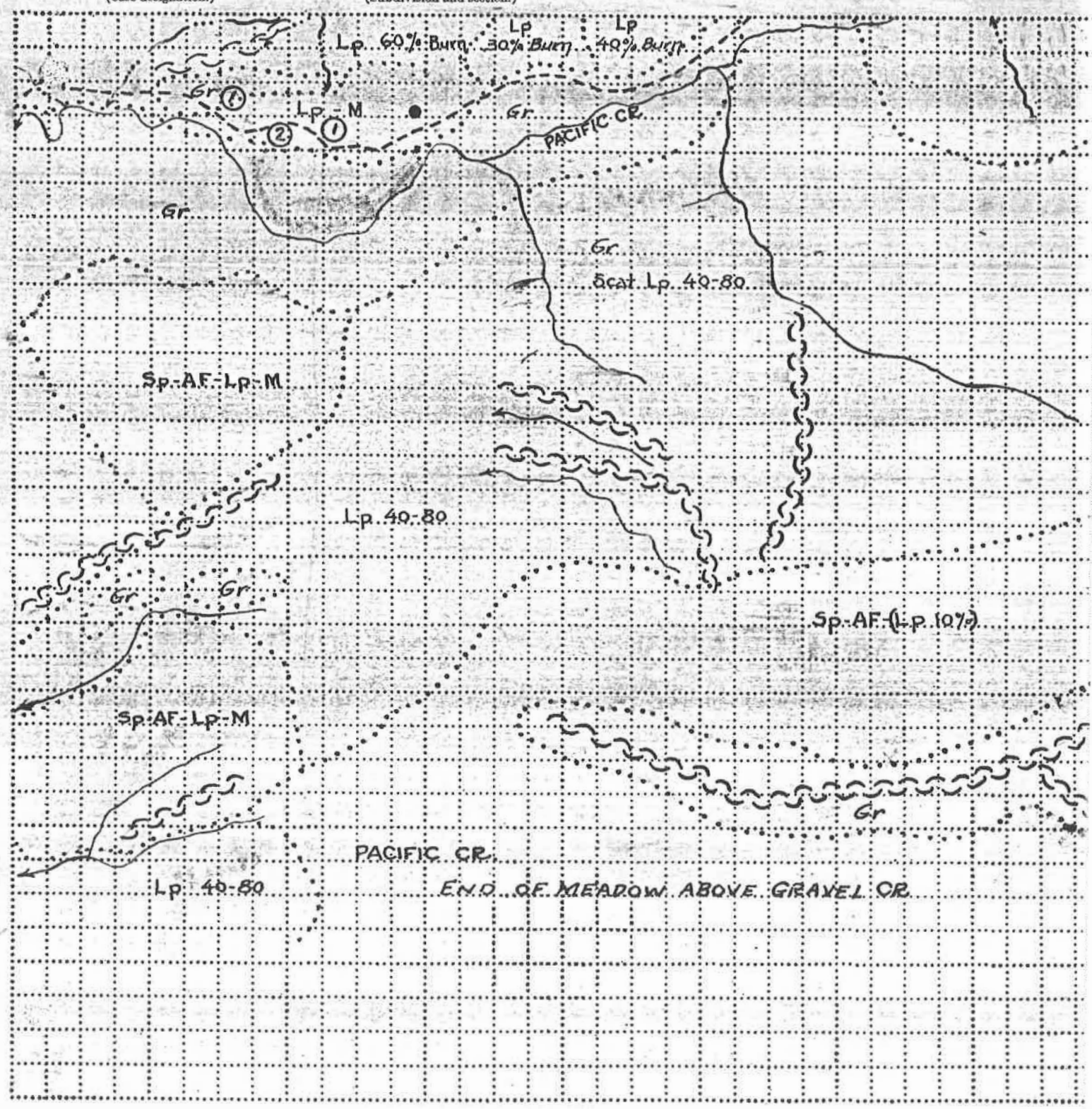
8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 2560 Acres

#14 (Case designation.), (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 40 A Lp 80 TREES

_____ Approved _____, 19____, _____
(Approving officer.)

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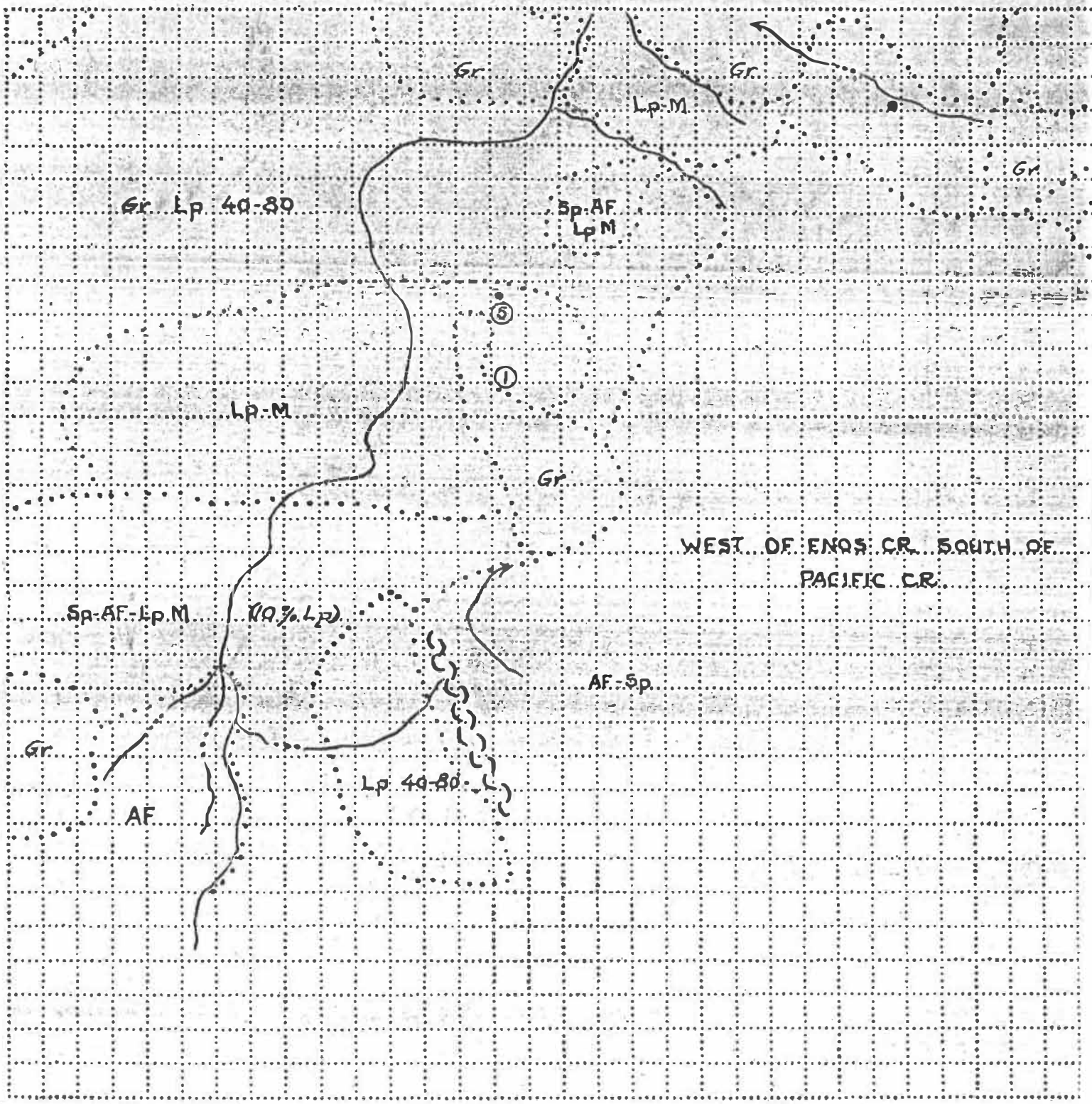
8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 1920 Acres

#15 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 200 A Lp. 150 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

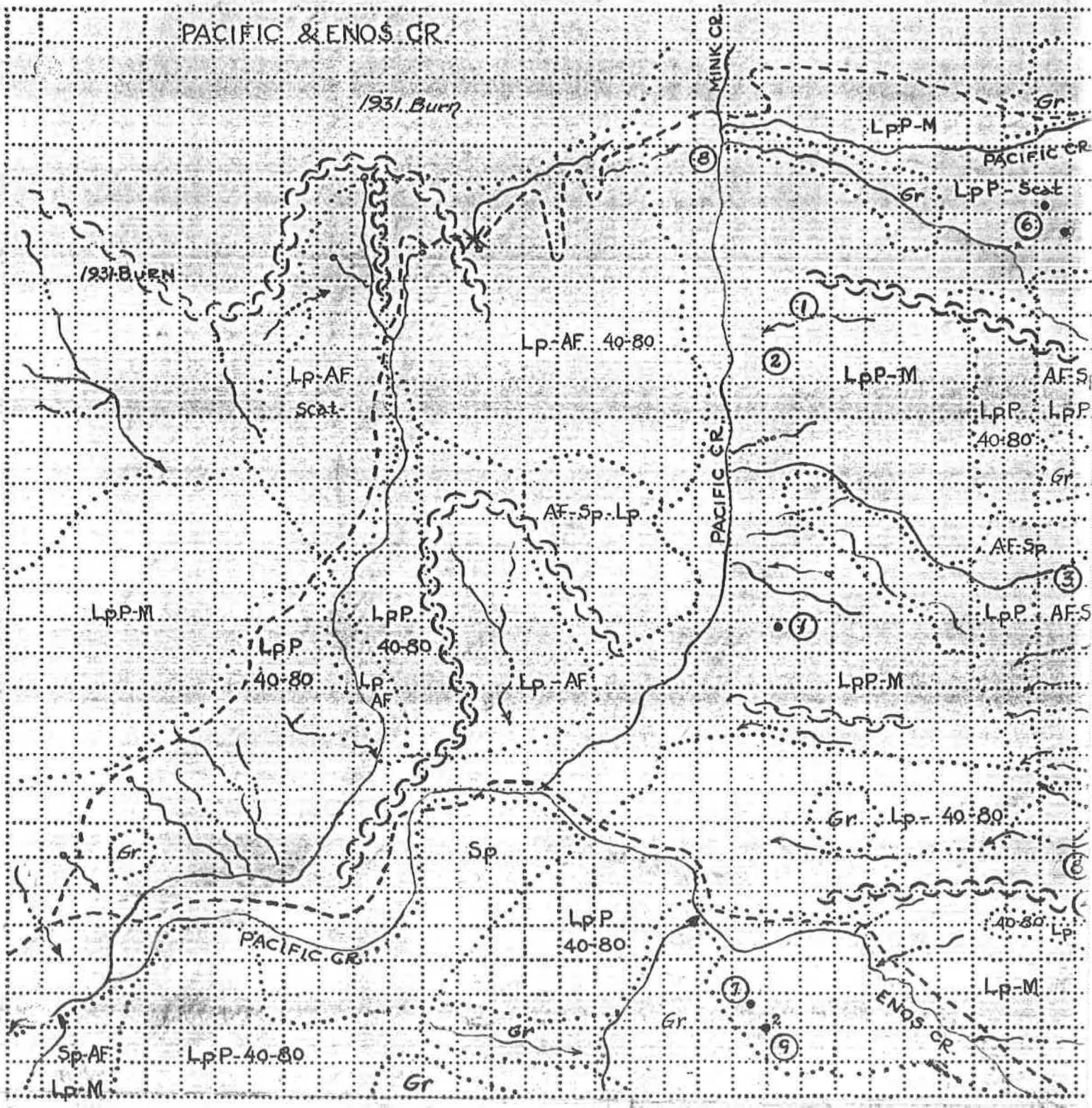
Form 878a
(Revised April, 1916)

8—3465

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 2560 Acres

16 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 920 A Lp 2760 TREES.

_____ Approved _____, 19____, _____ (Approving officer.)

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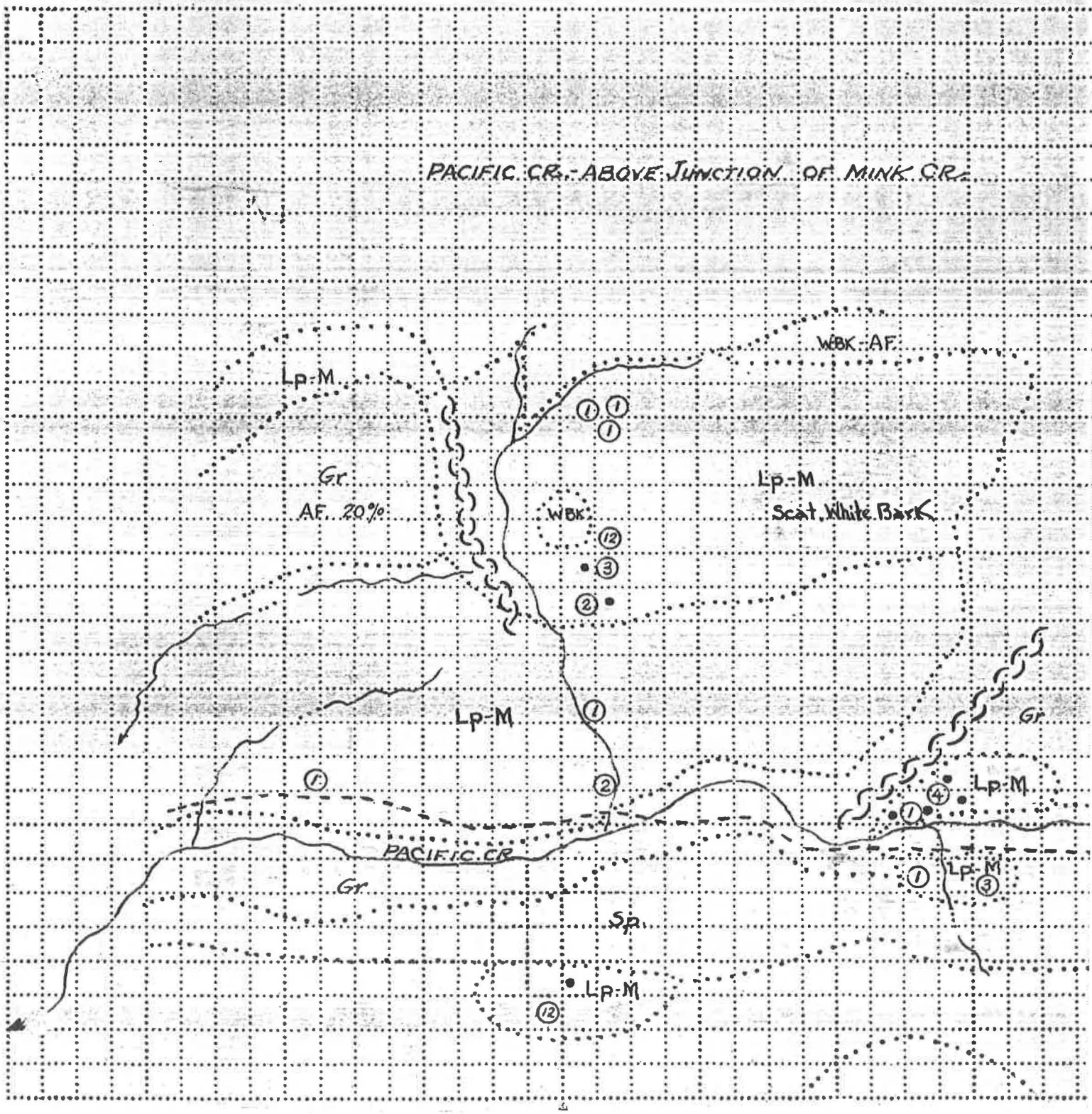
8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 2020 Acres

#17 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 1160 ♀ Lp. 2320 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

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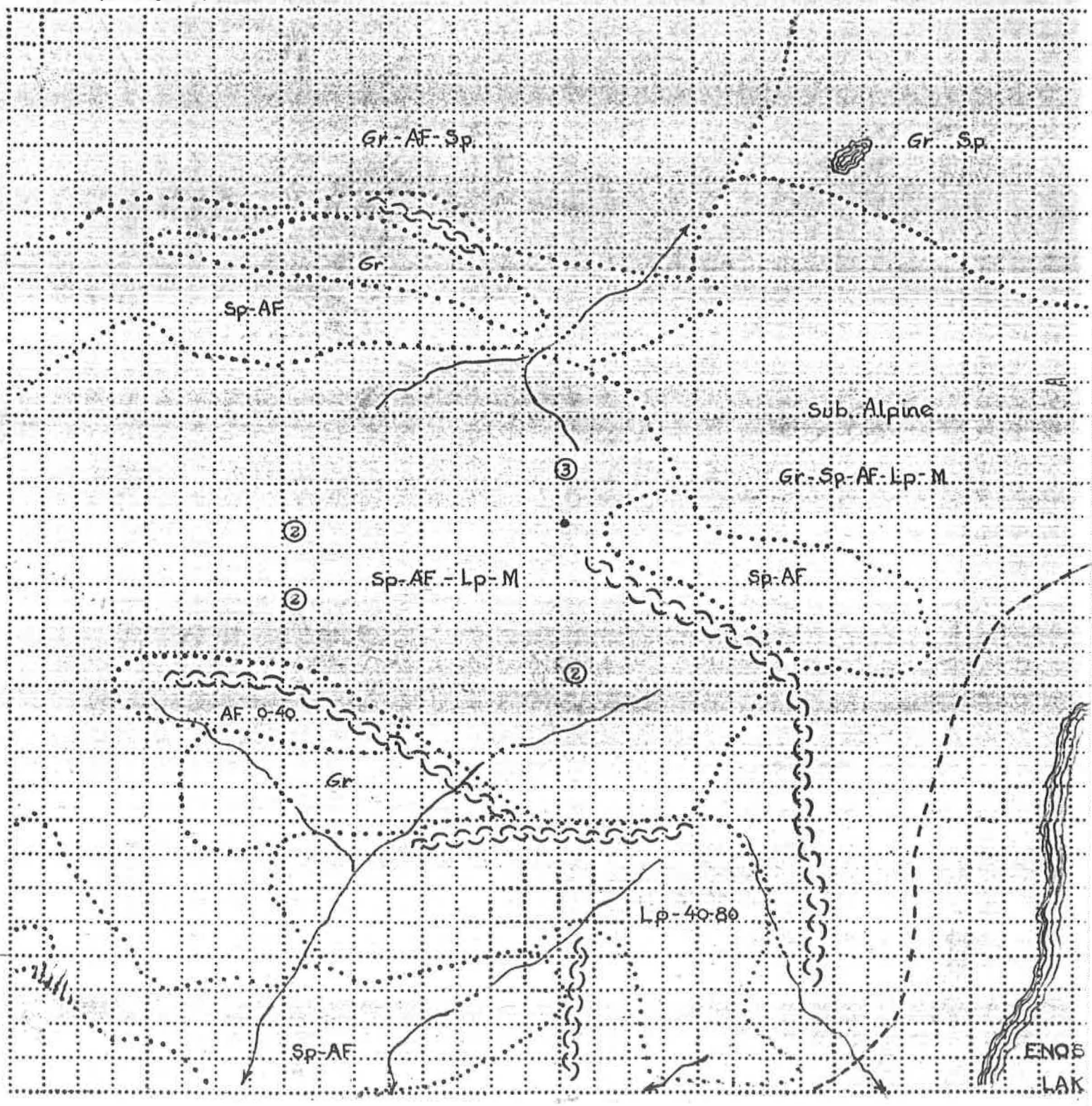
(Revised April, 1916)

8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 2560 Acres

#18 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 480 A Lp 432 TREES

_____ Approved _____, 19___, _____ (Approving officer.)

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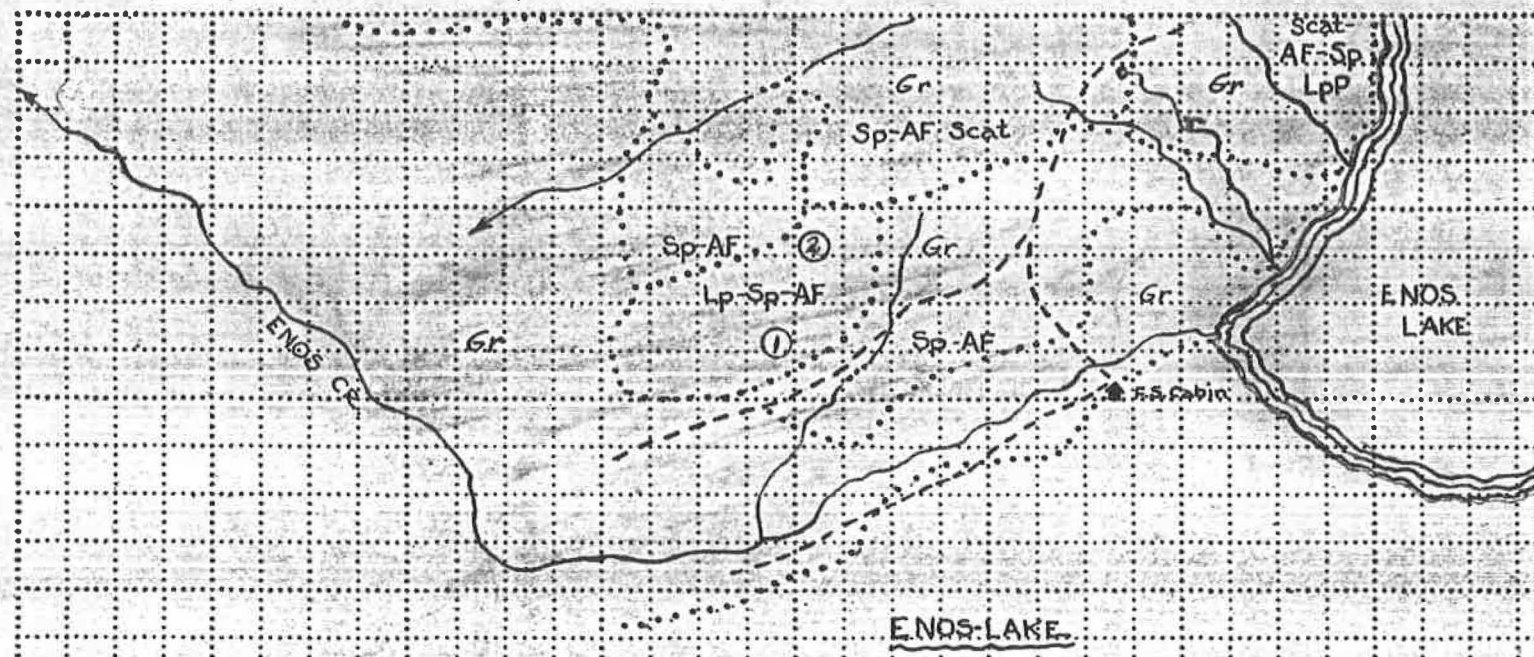
(Revised April, 1916)

8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 640 Acres

#19 (Case designation.) _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 28 A Lp 29 TREES

_____ Approved _____, 19____, _____ (Approving officer.)

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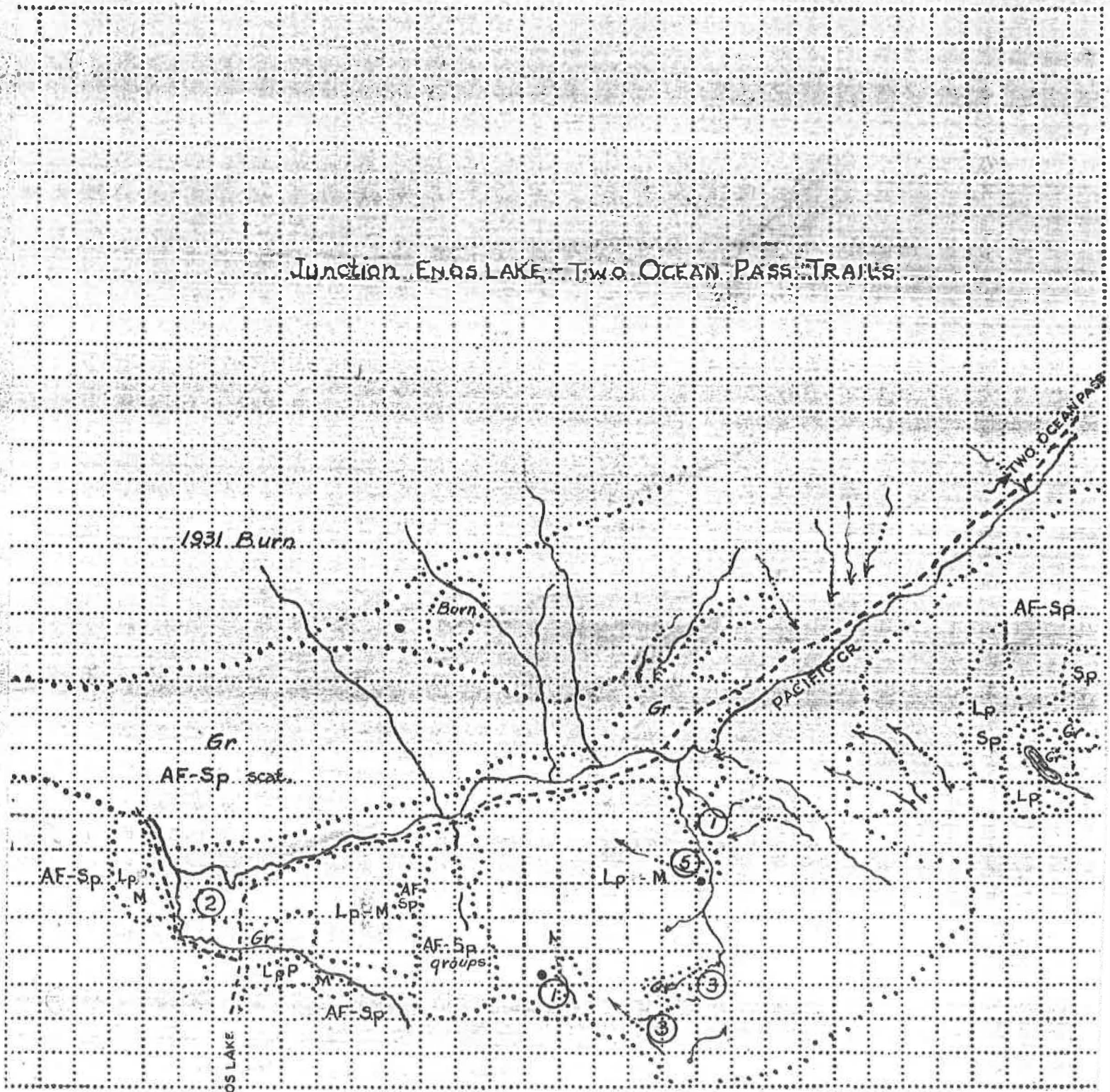
(Revised April, 1916)

8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. 18°30' Area 1280 Acres

#20 (Case designation.) _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: _____

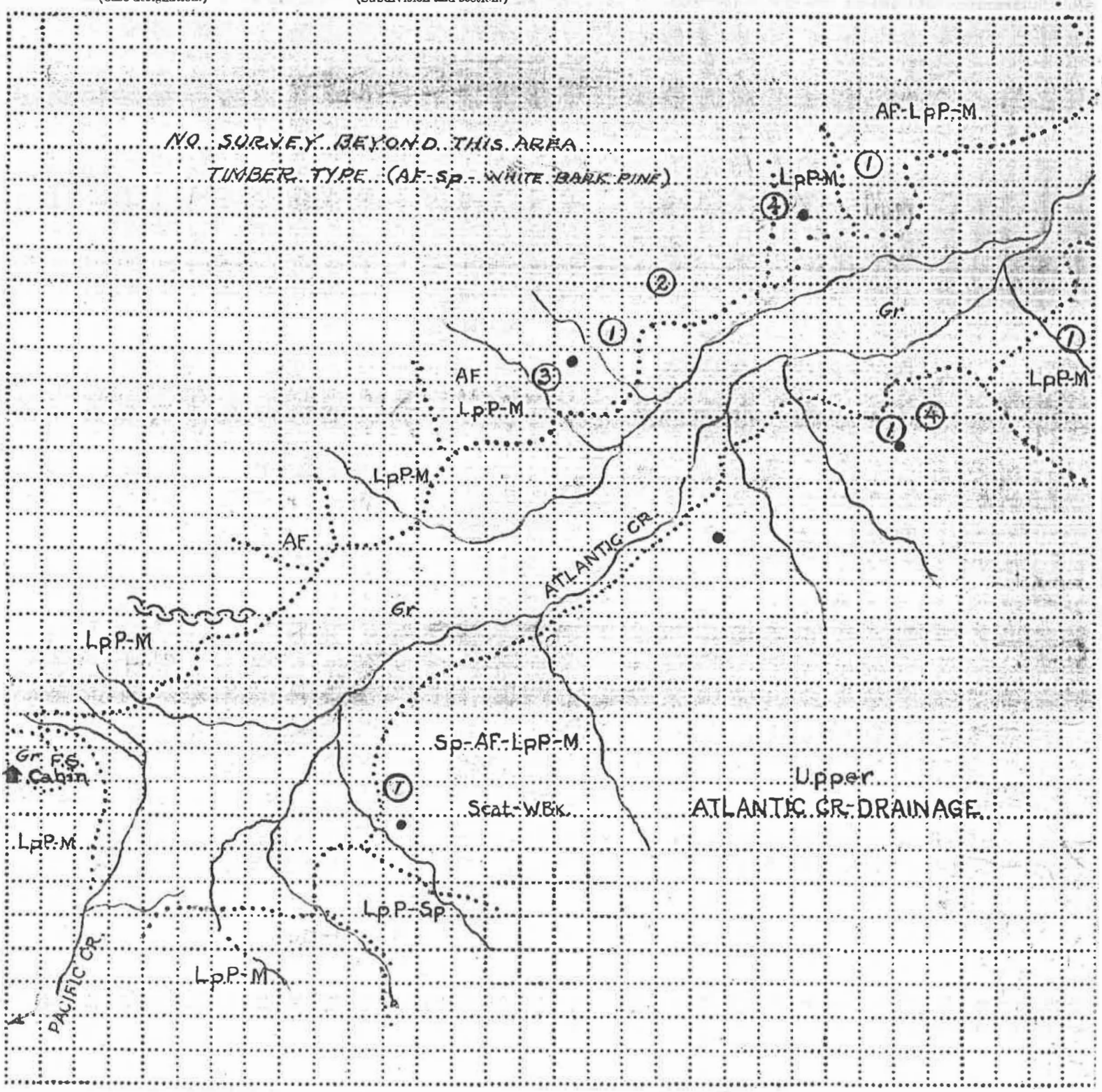
_____ Approved _____, 19____, _____ (Approving officer.)

Form 878a (Revised April, 1916) 8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

..... Land District. Mag. Declin. _____ Area 1280 Acres

21 (Case designation.), (Subdivision and section.) T. _____ R. _____ Mer. Scale _____ inches = 1 mile



Field work by ....., Date _____, Platted by .....

Remarks: 720 A Lp 403 TREES

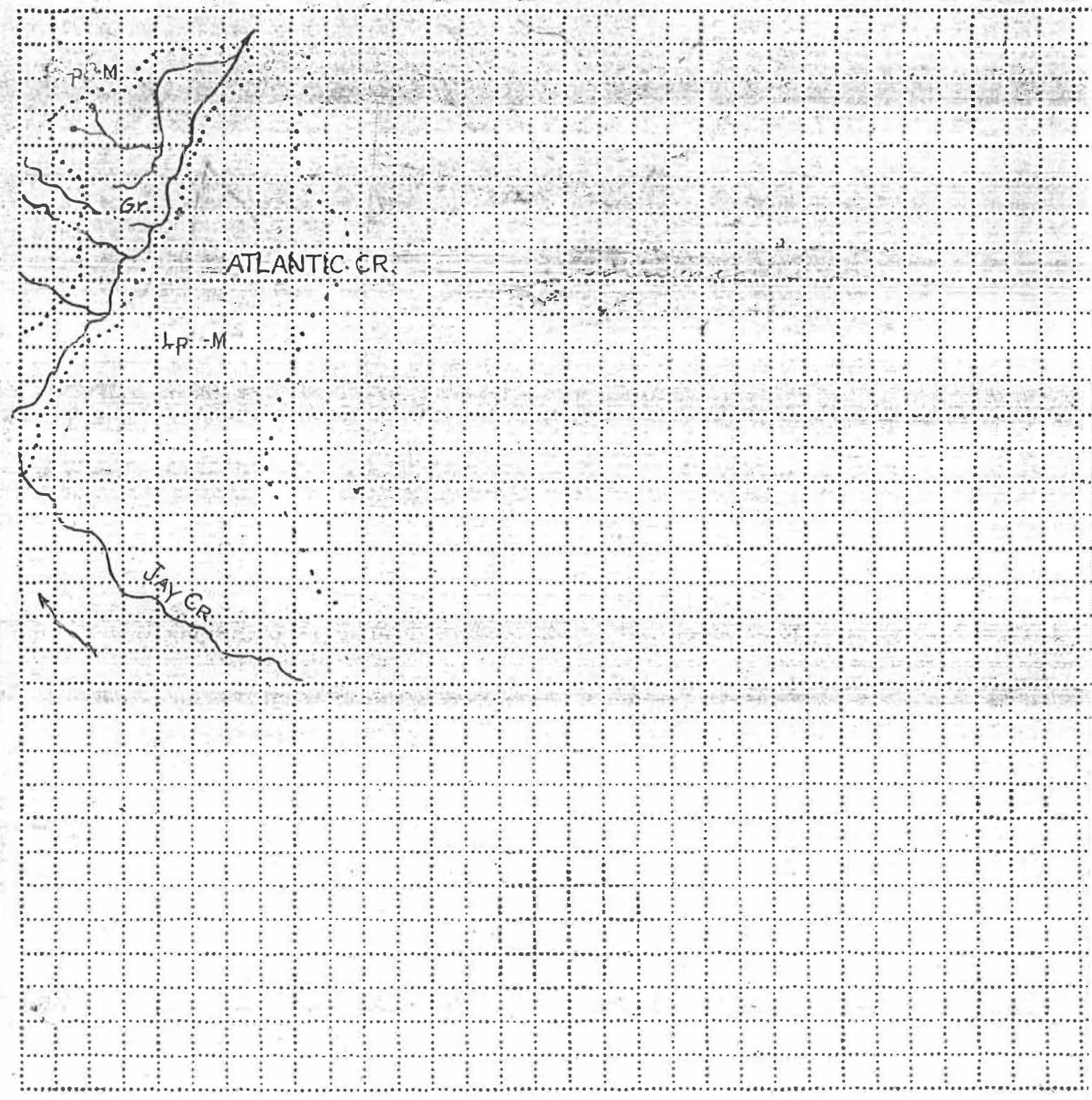
_____ Approved _____, 19____, _____ (Approving officer.)

Form 878a (Revised April, 1916) 8—3405

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area 320 Acres

#22 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

Remarks: 320 A Lp No TREES

_____ Approved _____, 19___, _____ (Approving officer.)

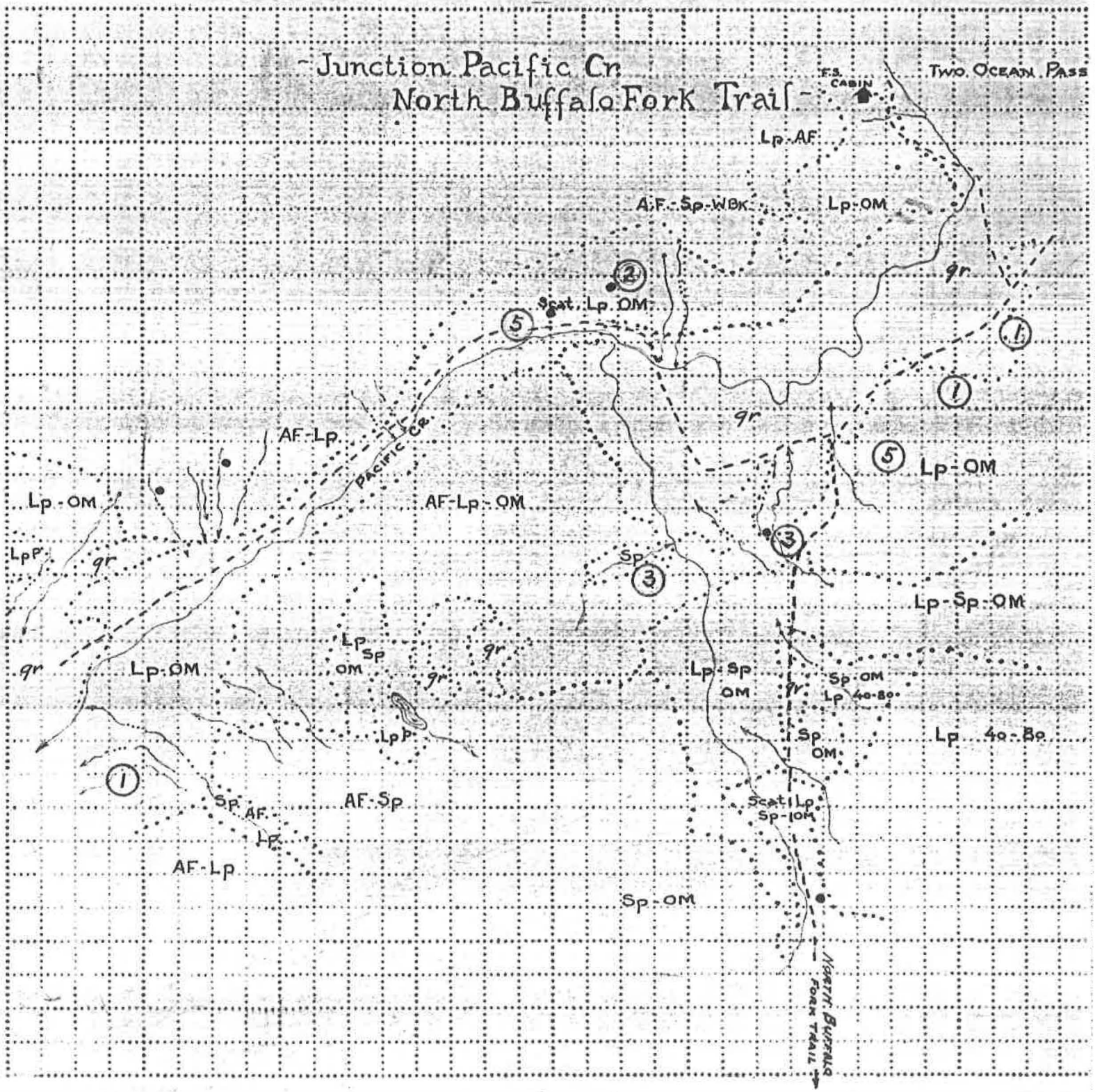
Form 878a
(Revised April, 1916)

8—3403

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land District. Mag. Declin. _____ Area _____ Acres

23 (Case designation.), _____ (Subdivision and section.) T. ____ R. ____ Mer. Scale ____ inches = 1 mile



Field work by _____, Date _____, Platted by _____

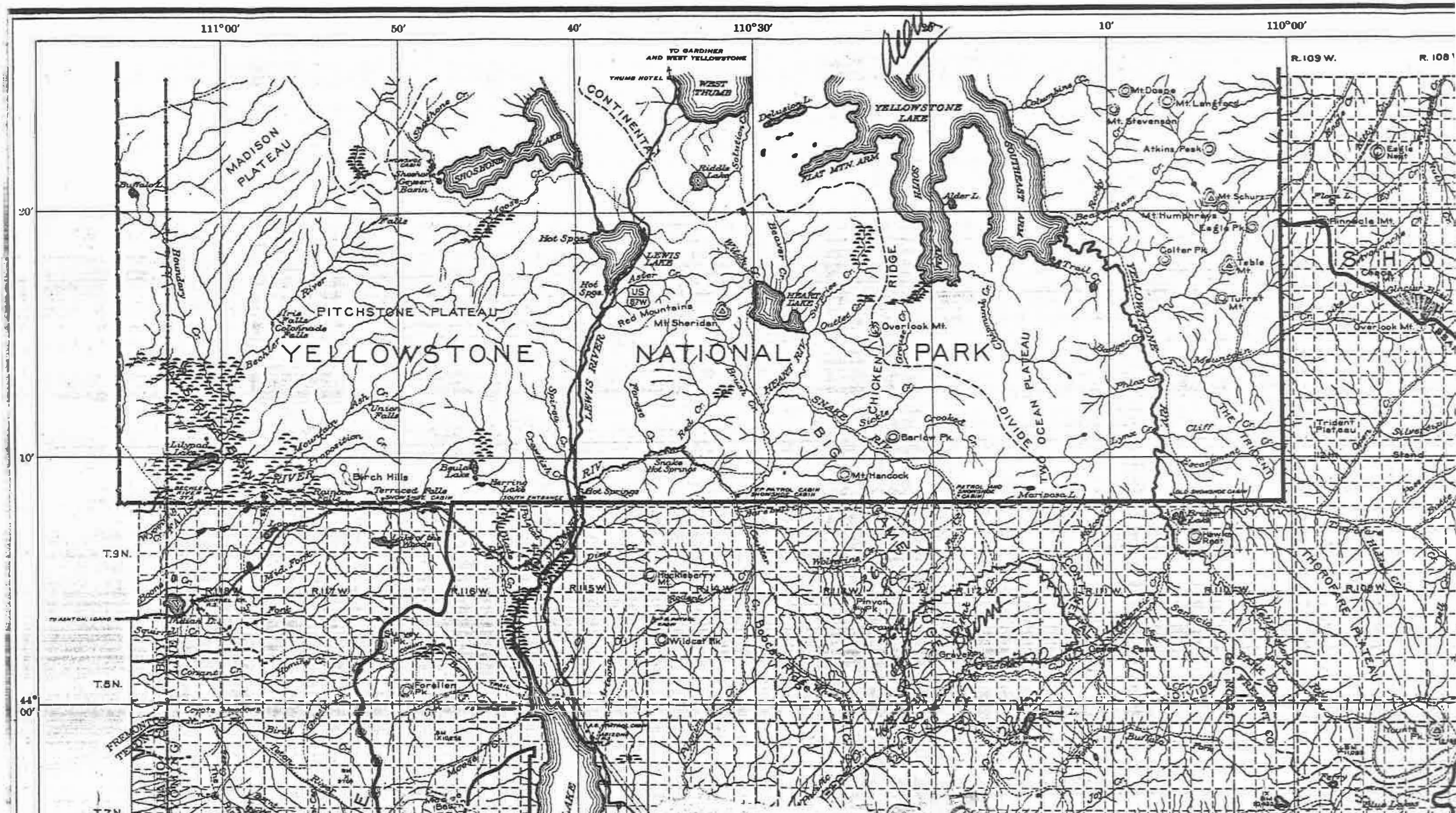
Remarks: 307 ACRES 184 New Attacks

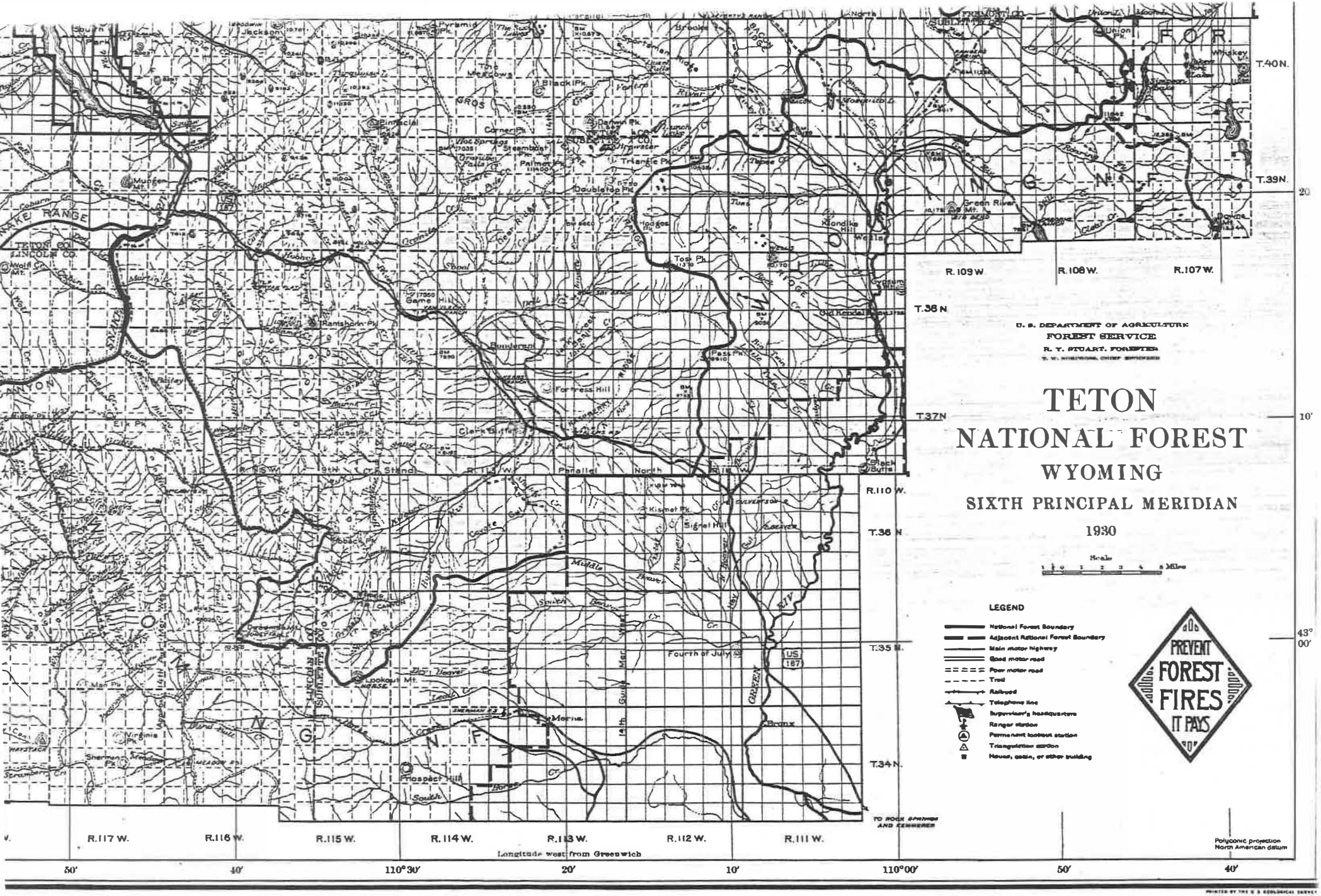
_____ Approved _____, 19____, _____ (Approving officer.)

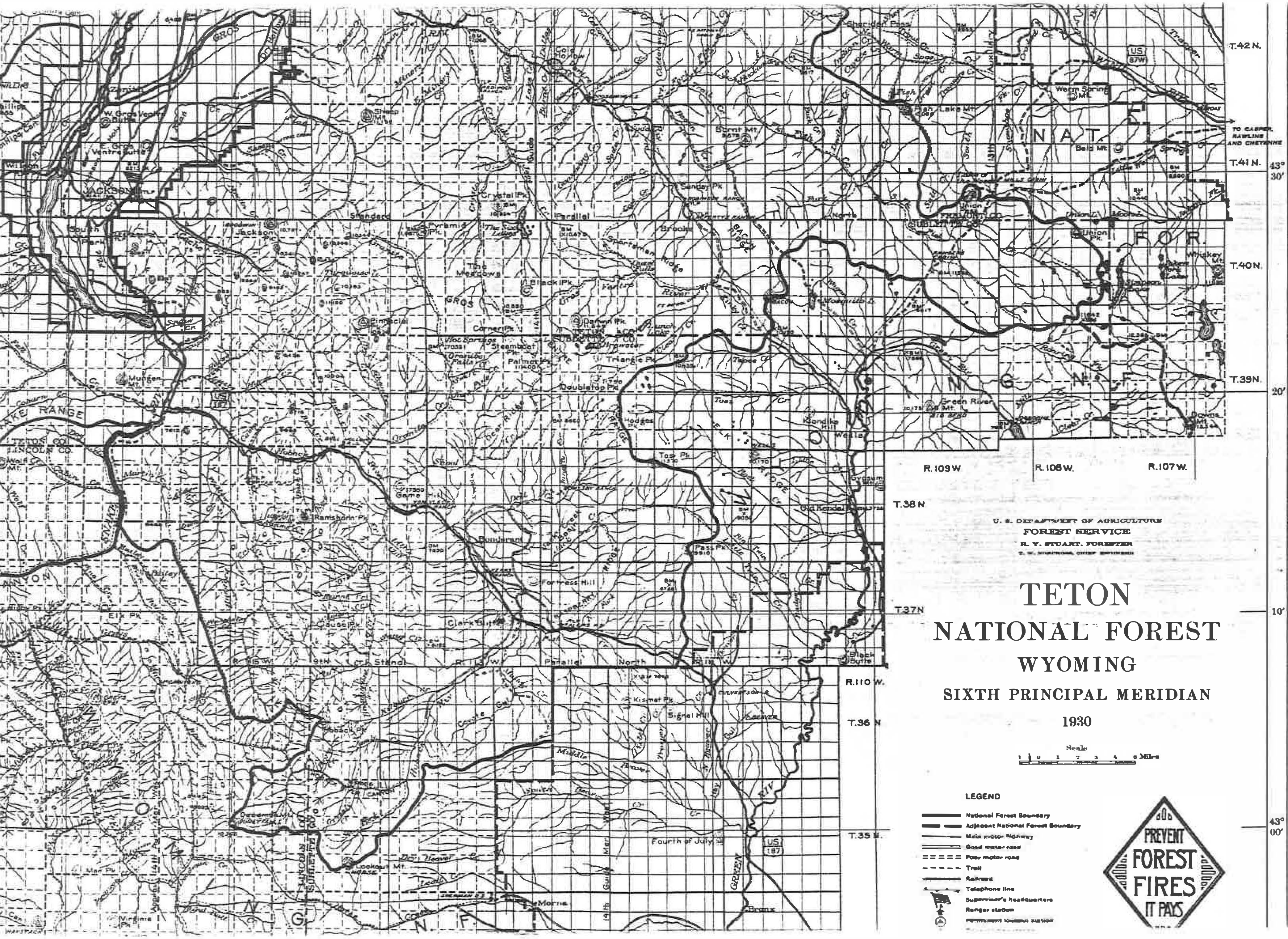
Form 578a
(Revised April, 1916)

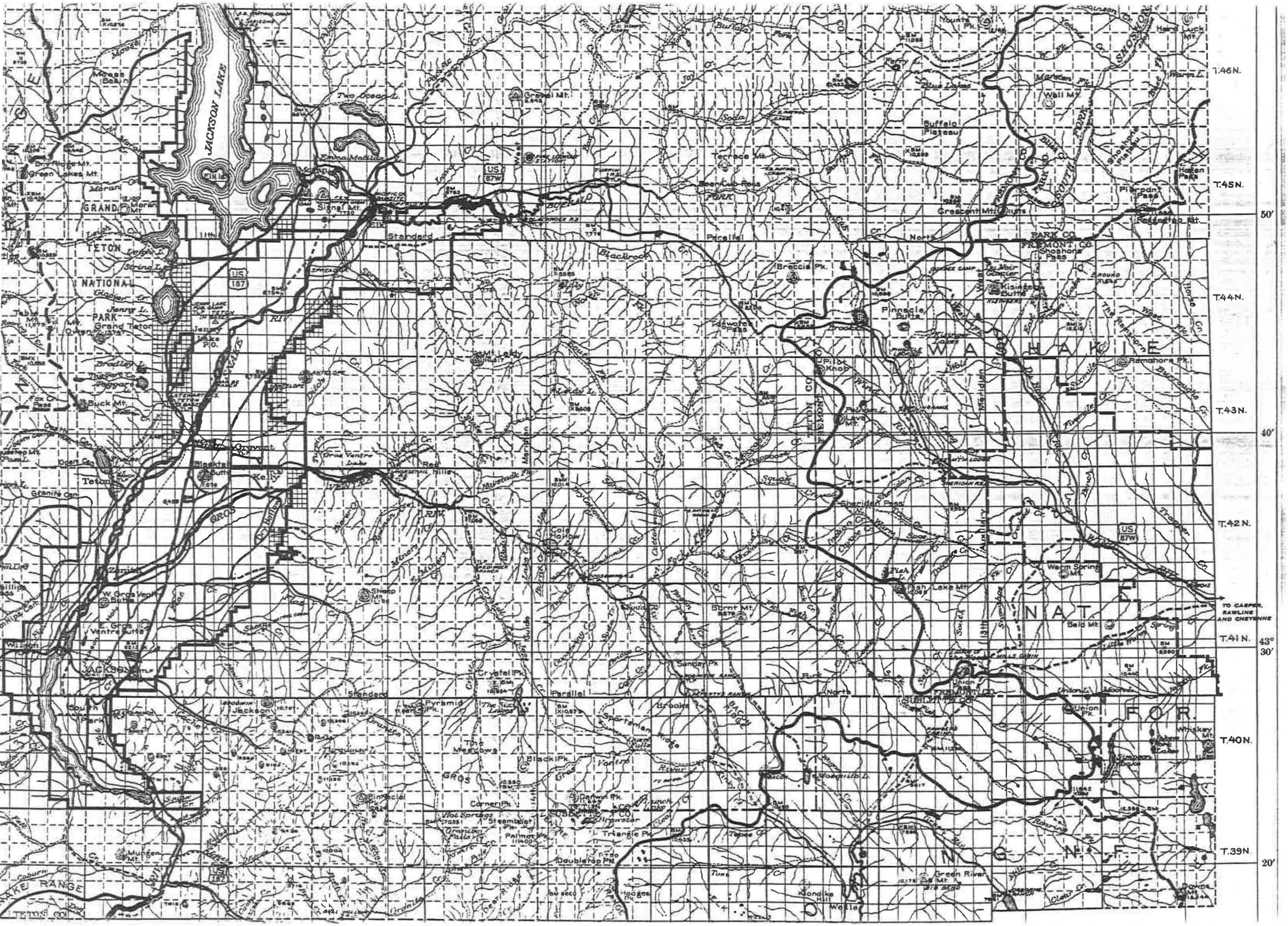
8—3405

Inner Teton 1933

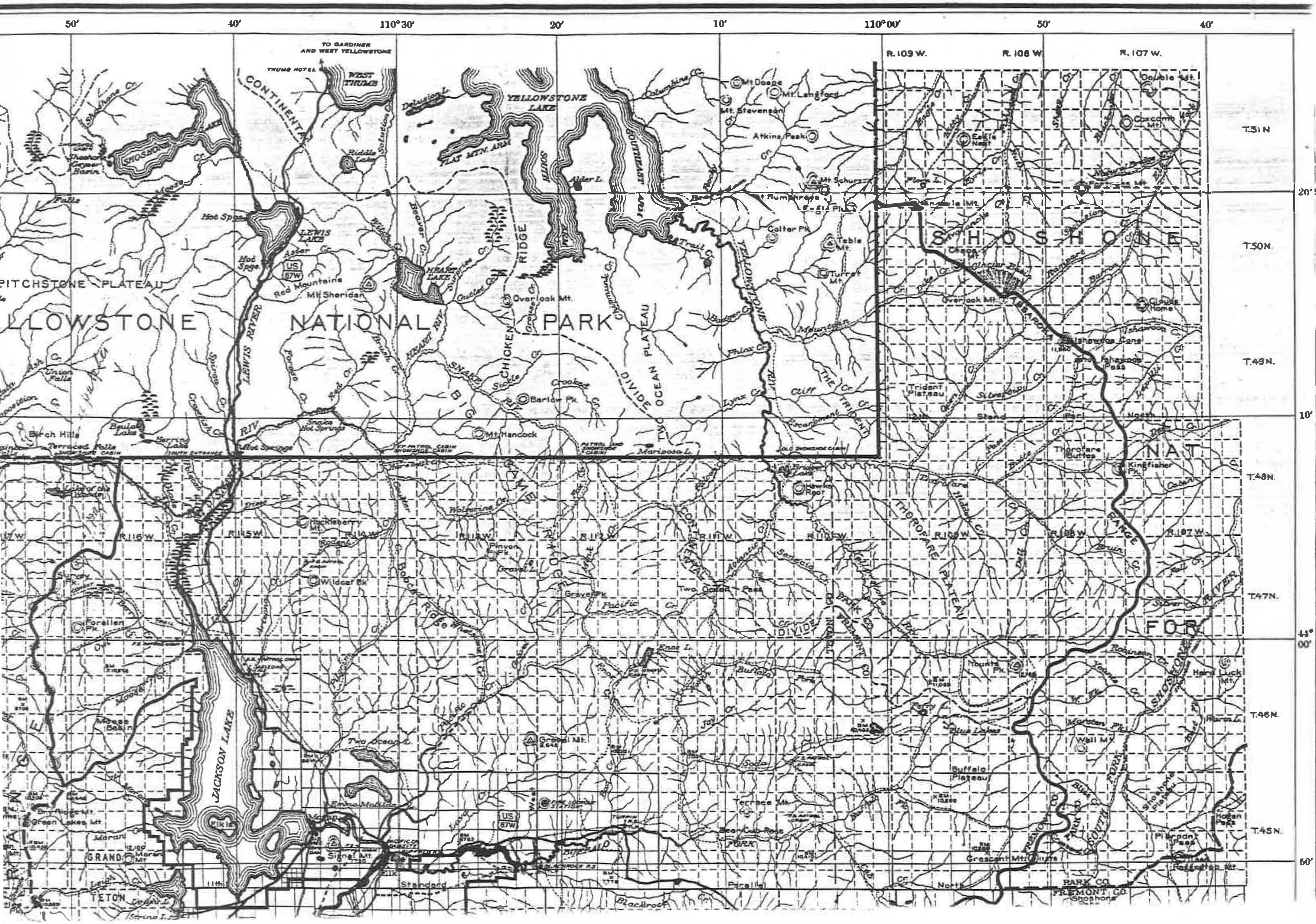



U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R. Y. STUART, FORESTER
TETON
NATIONAL FOREST
WYOMING
SIXTH PRINCIPAL MERIDIAN
1930
Scale
LEGEND
National Forest Boundary
Adjacent National Forest Boundary
Main motor highway
Good motor road
Poor motor road
Trail
Railroad
Telephone line
Supervisor's headquarters
Ranger station
Permanent lookout station
Triangulation station
House, cabin, or other building
PREVENT FOREST FIRES IT PAYS
T.40N.
T.39N.
T.38 N.
T.37N
T.36 N.
T.35 N.
T.34N.
R.109 W.
R.108 W.
R.107 W.
R.110 W.
R.117 W.
R.116 W.
R.115 W.
R.114 W.
R.113 W.
R.112 W.
R.111 W.
Longitude west from Greenwich
50'
40'
110°30'
20'
10'
110°00'
50'
40'
20
10'
43° 00'
Polyconic projection
North American datum


U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R. Y. STUART, FORESTER
TETON
NATIONAL FOREST
WYOMING
SIXTH PRINCIPAL MERIDIAN
1930
Scale
1 0 1 2 3 4 5 Miles
LEGEND
National Forest Boundary
Adjacent National Forest Boundary
Poor motor road
Trail
Telephone line
Supervisor's headquarters
Ranger station
PREVENT
FOREST
FIRES
IT PAYS
T.42 N.
T.41 N.
T.40 N.
T.39 N.
T.38 N
T.37 N
T.36 N
T.35 N.
R. 109 W
R. 108 W.
R. 107 W.
R. 110 W.
43° 30'
20'
10'
43° 00'
TO CASPER, RAWLINS AND CHEYENNE
JACKSON
Wilson
South Park
GROS
Sheep Mt.
Crystal Pk.
Pyramid Pk.
Jackson Pk.
The Meadows
Black Pk.
Darwin Pk.
Triangle Pk.
Doubletop Pk.
Pinnacle Pk.
Corner Pk.
Steamboat
Palmer Pk.
Munger
TETON CO.
LINCOLN CO.
Hoback
Game Hill
Ramshorn Pk.
Bondurant
Fortress Hill
Clark Butte
Clause Pk.
Elk Pk.
Hoback Pk.
Pass Pk.
Kismet Pk.
Signal Hill
Fourth of July
Lookout Mt.
Morna
Bronx
GREEN
Middle
Union Pk.
Burnt Mt.
Sandey Pk.
Fish Lake Mt.
Warm Spring Mt.
Bald Mt.
Sheridan Pass
Union Pass
Green River
Klondike Hill
Wells
Tosi Pk.
Black Butte
Whiskey Mt.
NAT.
FOR.
N. F.
N
F
Parallel
North
Standard
Brooks
Sportsman Ridge
Moose Cr.
US 187
US 187W



T.46N.
T.45N.
T.44N.
T.43N.
T.42N.
T.41N.
T.40N.
T.39N.
50'
40'
43° 30'
20'
TO CASPER, RAWLINS AND CHEYENNE
JACKSON LAKE
TETON
NATIONAL
PARK
GRAND
WASHAKIE
NAT
FOR
PARK CO.
FREMONT CO.
TETON CO
Buffalo Plateau
Crescent Mtn.
Pinnacle Butte
Breccia Pk.
Lava Mt.
Pilot Knob
Burnt Mt.
Bald Mt.
Warm Spring Mt.
Union Pk.
Sheep Mt.
Mt. Leidy
Buck Mt.
Grand Teton
Sportsman Ridge
Green River
Doubletop Pk.
Triangle Pk.
Black Pk.
Jackson Pk.
Crystal Pk.
Terrace Mt.
Gravel Mt.
Signal Mt.
Ramshorn Pk.
Burroughs Cr.
Blackrock Cr.
Gros Ventre
Mount Moran
Teton Pass
Granite Cr.
Two Ocean L.
Emma Matilda L.
Jenny L.
Wall Mt.
Hancock Mt.
Klondike Hill
Bacon Ridge
Meridian



50'
40'
110°30'
20'
10'
110°00'
50'
40'
TO GARDINER AND WEST YELLOWSTONE
THUMB HOTEL
WEST THUMB
YELLOWSTONE LAKE
FLAT MTN. ARM
SOUTH ARM
SOUTHEAST ARM
SHOSHONE LAKE
LEWIS LAKE
HEART LAKE
PITCHSTONE PLATEAU
YELLOWSTONE NATIONAL PARK
CONTINENTAL DIVIDE
TWO OCEAN PLATEAU
CHICKEN RIDGE
BIG SNAKE RIV
LEWIS RIVER
YELLOWSTONE RIV
THE TRIDENT
Mt Doane
Mt. Langford
Mt. Stevenson
Atkins Peak
Mt Schurz
Colter Pk.
Table Mt.
Turret Mt.
Mt Sheridan
Red Mountains
Overlook Mt.
Barlow Pk.
Mt. Hancock
Alder L.
Riddle Lake
Delusion L.
Mariposa L.
R. 109 W.
R. 108 W.
R. 107 W.
T. 51 N.
T. 50 N.
T. 49 N.
T. 48 N.
T. 47 N.
T. 46 N.
T. 45 N.
20'
10'
44° 00'
50'
SHOSHONE NAT FOR
ABSAROKA RANGE
Eagle Peak
Trident Plateau
Thorofare Buttes
Kingfisher Pk.
THOROFARE PLATEAU
Two Ocean Pass
Hawks Rest
Huckleberry Mt.
Pinyon Pk.
Wildcat Pk.
Forellen Pk.
Gravel Pk.
Gravel Mt.
Enos L.
Younts Pk.
Blue Lakes
Buffalo Plateau
Terrace Mt.
Wall Mt.
Shoshone Plateau
Hard Luck Mt.
Pinyon Pk.
JACKSON LAKE
Elk Is.
Two Ocean L.
Emma Matilda L.
Signal Mt.
Moran
GRAND TETON
Leigh L.
String L.
Moose Basin
Crescent Mt.
Parallel
Standard
PARK CO.
FREMONT CO.
US 87W
R. 116 W.
R. 115 W.
R. 114 W.
R. 113 W.
R. 112 W.
R. 111 W.
R. 110 W.
R. 109 W.
R. 108 W.
R. 107 W.